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ABSTRACT

This marketing unit focuses on the importance of forecasting in order for a farm family to develop marketing plans. It describes sources of information and includes a glossary of marketing terms and exercises using both fundamental and technical methods to predict prices in order to improve forecasting ability. The unit is organized in the following eight sections: introduction to marketing; what marketing is and why it is important; developing marketing goals and plans; market analysis and forecasting; summary; appendixes providing sources of market information, livestock marketing information, electronic and computer information systems, grain market situations, market reports, and technical information; a glossary; and seven exercises. A teacher's guide includes objectives, a teaching outline, suggested on-and off-farm learning activities, interest approaches, discussion guides, and answers to exercises. Thirty transparency masters are included. (KC)

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INTRODUCTION TO AGRICULTURAL MARKETING

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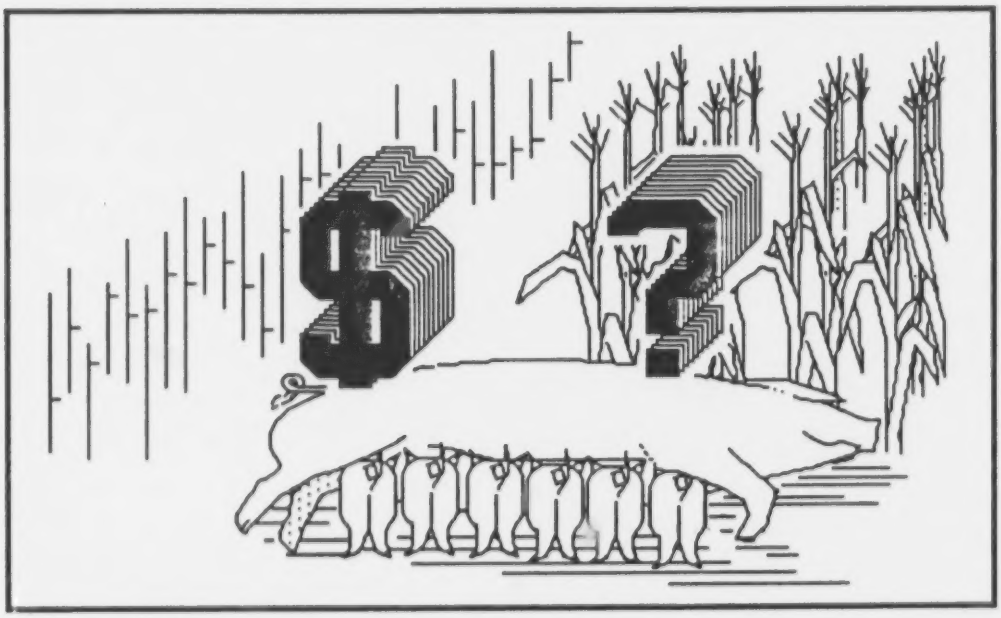
INTRODUCTION TO AGRICULTURAL MARKETING

OBJECTIVES:

Upon completion of this section of the marketing unit, each farm family will:

1. understand the importance of marketing to the farming operation,
2. understand fundamental and technical factors affecting agricultural commodity prices,
3. identify how seasonal patterns affect market returns,
4. be familiar with sources of information regarding factors which affect commodity prices, and
5. improve its ability to forecast price commodities based on market information.



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Introduction to Marketing

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I. INTRODUCTION TO MARKETING

The difference between making a profit or loss on grain or livestock could be in the timing and method of pricing and selling your products. Establishing a marketing plan, based on clear knowledge of production costs, helps you determine marketing alternatives which will be useful to you. With a marketing plan you market for a purpose rather than "taking what you can get."

This first marketing unit focuses on the importance of forecasting in order to develop your own marketing plans. It is important to become familiar with sources of market information on which to base these forecasts. Sources of information which give fundamental and technical analysis of hog, corn, and soybean markets are described. Commonly used marketing terms are included in the glossary. Exercises using both fundamental and technical methods to predict prices will help you improve your forecasting ability.

In subsequent marketing units, the emphasis is on assessing livestock and grain marketing alternatives and developing your own marketing goals, plans, and strategies based on your own financial situation.

II. WHAT IS MARKETING AND WHY IS IT IMPORTANT?

Agricultural marketing is the process of making decisions about selling or pricing agricultural products for current or future delivery.

While marketing has always been important, it has become even more important with rapidly changing prices. Prices for grain and livestock have been volatile over the past few years. Seasonal price movement is common. In one month, soybean prices may change $1-$2 per bushel, corn prices $.40-$1.00 per bushel and hog and cattle prices $2-$5 per hundredweight. These variations in price can have a significant impact on returns from marketing.

Assume you are a farm family with 26,000 bushels of corn, 8,000 bushels of soybeans and 1,000 market hogs averaging 235 pounds. If you were to receive $1 more per bushel in soybeans, $.40 per bushel more for corn and $2 per hundredweight more in hogs due to improved marketing, you would receive an additional $23,100 (i.e. corn - $10,400, soybeans - $8,000, hogs - $4,700). The difference in whether you make or lose money could be in the decision of when and how to sell your products. Timing and pricing your transactions could make a great difference in the amount of income available to meet costs of production, pay family living expenses, and reinvest in the farm business, as seen in Exercise 10-1.

The volatility in agricultural prices the past few years may continue. Markets are sensitive to world crop and livestock conditions and influences. The more information and education you can receive regarding marketing tools and how to use them, the better you will be able to deal with the uncertain world of prices.

III. DEVELOPING MARKETING GOALS AND PLANS

MARKETING GOALS

A marketing plan should reflect specific goals of the farm family such as covering

breakeven prices at different levels of cost recovery. What is needed to cover the cash costs? To cover total costs? Costs excluding labor? Total costs including a labor return? All costs, plus some specified return for your management? The income statement completed in Unit 8 "Year-End Analysis" can help you answer some of these questions. Analysis by enterprise gives more specific information.

There are other considerations. The marketing plan should reflect your particular financial situation. What are the cash-flow needs for family living and the farm business in the months ahead? How much price risk can you carry, based on your overall net worth? How much risk can you comfortably handle from an emotional standpoint? For example, a producer with a sizable net worth and little or no debt, can carry considerable price risk. The marketing strategy followed can be more speculative. However, a producer with relatively high debt, in relation to assets or cash flow, should be more cautious about risking a loss. A marketing strategy that will assure a price high enough to provide a moderate return above cash costs may be more appropriate than speculating on a higher price.

Within a given cost, financial and risk-bearing framework, your own expectations about future prices will be an important consideration in your marketing plan. A high probability of steady to higher prices may dictate little or no forward pricing of commodities. But if you feel there's a good chance of lower prices ahead, forward pricing or price guarantee alternatives may warrant careful consideration.

The Iowa State University Extension Service releases cost information for both livestock and grain enterprises. Historical information on estimated returns from livestock operations in Iowa is included. This information can be useful in setting profit objectives and evaluating pricing alternatives, but does not guarantee that your costs or returns are the same as those shown.

IV. MARKET ANALYSIS AND FORECASTING

The foundation of a marketing plan is some estimate, forecast or expectation of prices in the weeks and months ahead.

There are two basic approaches to analyzing markets and developing forecasts of market prices. One is **fundamental analysis** and the other is **technical analysis**. Fundamental analysis is a process of studying and analyzing known and expected supply and demand factors in order to understand market behavior and to forecast market conditions. In contrast, technical analysis makes use of charts, trading volume, the count of open futures contracts of a commodity (open interest), and mathematical formulas to forecast price behavior. Technical analysis places considerable emphasis on the prior history of price movements in the interpretation of current markets. Both approaches can be useful.

FUNDAMENTAL ANALYSIS OF THE MARKET

Developing a fundamental forecast of prices for some future time period involves several estimates. You must determine your estimates of future market supplies of the product and competing products, demand conditions for the product, and the relationship between these market factors and the product prices. It is not an exact science by any means. However, past market relationships can be quantified statistically and used as guidelines for forecasting.

Some market analysts rely heavily upon forecasting models that generate predictions based entirely on relationships derived from historical data. Other analysts combine indications based on these quantitative relationships with their own judgement and knowledge of the market to develop supply and price forecasts. They make subjective adjustments, if needed, to reflect present conditions or probable factors not adequately reflected in the forecasting model. This is probably the most widely used approach by market analysts in industry, the commodity trade, and at universities. In recent years, more volatile markets and instant communication have increased the need to add subjective judgement to forecasts as well as to regularly estimate the quantitative relationships between prices and various price factors.

The material that follows includes a more detailed discussion of fundamental and technical analysis of the markets. Hog, corn, and soybean markets are used as examples of these two market analysis methods.

FUNDAMENTAL ANALYSIS OF THE HOG MARKET

The main variables that should be considered in analyzing the hog market and developing a price forecast are:

- the per capita supply of pork
- the demand for pork
- the price or supply of competing meat and poultry products
- the farm to retail spread or margin on pork

Per Capita Supply of Pork

The supply of pork is the single most important influence on hog prices. The Quarterly Report on Hogs and Pigs, from the USDA's National Agricultural Statistics Service, is released in March, June, September and December. It provides indications of market supplies for up to a year into the future. The reports include estimates of:

1. hog inventories broken down into breeding stock and market hogs, and with market hogs reported by weight groupings;
2. sow farrowings, pigs per litter and pig crop by quarters for prior months;
3. estimates of sow farrowing plans and intentions for the next six-month period.

The June and December reports cover the U.S., with individual estimates for 10 major hog producing states in June and for all states in December. The March and September reports cover only the 10 major states. These reports provide data that can be used to develop forecasts of hog slaughter, pork production and per capita pork supplies.

The historical relationships between hog inventories or pig crops and subsequent slaughter are used as a guide to forecast slaughter. These relationships can be estimated statistically or more simply by computing the average ratio of inventories or pig crops to later slaughter.

Average ratios of hog inventories of specified weights to subsequent slaughter and ratios of pig crops in specified periods to later marketing can be applied to current pig crop and inventory estimates to provide indications of **future marketings.** Average slaughter to inventory ratios for recent years are in Table 1. For example, the March 1, 1989, inventory

of 60 to 179-lb. hogs in 10 states was estimated in the Quarterly Report on Hogs and Pigs at 16,073,000 head. Multiplying this number by 1.30 (the 1984-88 average ratio of March 60 to 179-lb. hog inventory to April-June slaughter found in the monthly Livestock Slaughter report) yields an April-June 1989 slaughter forecast of around 20,895,000 head, up only slightly from 1988. (16,073,000 x 1.30 = 20,895,000).

Table 1. Ratio of Hog Slaughter to Market Hog Inventories, 1984-88 Average

Inventory of 60-179 lb. Hogs			Inventory of Hogs Under 60 lbs.	
Inventory Date	Slaughter Period	Slaughter to Inventory Ratio	Slaughter Period	Slaughter to Inventory Ratio
Dec. 1 [a]	Jan.-March	.97	April-June	1.16
Mar. 1 [b]	April-June	1.30	July-Sept.	1.55
June 1 [a]	July-Sept.	1.02	Oct.-Dec.	1.16
Sept. 1 [b]	Oct.-Dec.	1.33	Jan.-March	1.41

[a] Based on inventories in 50 states
[b] Based on inventories in 10 states

You can also estimate **future marketing** by assuming a certain average daily gain on hogs and applying this to hog inventories in various weight groups. The average daily gain to market weight for 60 to 120-pound hogs would probably be in the 1.5 to 1.6 pounds per day range. For 120 to 180-pound hogs, it would be 1.6 to 1.7 pounds per day, and for hogs 200 pounds and over, around 1.8 pounds per day. For example, the market time for hogs to be sold at 240 pounds which weigh 60-120 pounds on March 1 would be 75 to 112 days, or between May 15 and June 21.

Very rough **projections of slaughter** can be made by assuming that reported percentage changes in hog inventories or pig crops will result in similar percentage changes in slaughter in an appropriate later time period. If the March-May pig crop is 10% larger than the previous year, slaughter in the period from about mid-September through mid-December should be roughly 10% above the previous year assuming hogs are marketed at 5 to 7 months of age, with the bulk at around 6 months. A limitation of this and the other procedures mentioned is that they do not allow for changes in the number of gilts held for breeding from one year to the next. So some adjustment in slaughter forecasts should be made to reflect the impact of either herd expansion or liquidation in particular years.

In addition to current slaughter, the **pork supply** is also influenced by the average carcass weight on hogs slaughtered, by the volume of pork in cold storage, and by net imports of pork. Storage stocks are typically small in relation to annual production. In 1988, the average monthly cold storage holding of pork was 337 million pounds, equal to 2.2% of the year's output. Our foreign trade in pork usually results in larger imports than exports. In 1988, pork imports of 1,137 million pounds (carcass weight equivalent) were equal to 7.3% of domestic production whereas exports of 195 million pounds were equal to only 1.2% of production.

Estimated pork production, plus any adjustment for storage stocks and imports, are converted to an estimate of the **per capita supply,** the most relevant supply unit. This can

be done by reducing the estimated percentage change in pork production by 0.9%, the average annual U.S. population growth in recent years.

When the supply of pork is down, as indicated by hog slaughter, pork production, and per capita supplies, the price of hogs is likely to rise.

Demand for Pork

The demand for pork can be influenced by a number of factors. The availability and price of competing meat and poultry products and the disposable income of consumers are major influences--both short and longer term. Changes in consumer income, however, appear to have less impact on pork demand than in the past. Basic consumer preferences for pork in relation to other alternatives, population growth, and the age distribution of the population are important longer term demand factors. Consumer preferences can also be influenced by such things as product quality, dietary and health considerations, the form and convenience of the product and consumer life styles.

Year-to-year changes in per capita consumption of pork are sometimes confused with changes in demand. **But consumption and demand are not the same thing.** With a perishable product such as pork, the quantity consumed over a period of time is essentially equal to production aside from possible short term changes in cold storage stocks. Prices may fluctuate up and down with supply changes, however, to either encourage or slow the movement of pork through the market. Thus, demand measurement must consider both the quantity purchased (consumed) and the price at which the product is purchased.

Demand for pork is reflected in the quantity of pork that consumers will buy at a specific price. More pork will normally be bought when the price is lower than when it is higher. But buying more at a lower price is not necessarily an indication of demand change. There would be a change in demand only if the quantity purchased at a specific price is different now than in an earlier time period.

Price or Supply of Competing Meat and Poultry Products

Price forecasts are developed from estimates of the per capita supply of pork, supplies and prices of competing products, such as beef and chicken, changes in the demand for pork, and the level and changes in the farm to retail price spread for pork. The impact of these variables on hog prices can be estimated by use of what are called **price flexibilities**. Research has indicated that:

1. Each 1 percent change in the per capita supply of pork, on average, will result in a change in live hog prices in the opposite direction of 1.7 to 2.3 percent (average around 2.0 percent).
2. Each 1 percent change in the per capita supply of beef will have an effect on hog prices of .2 to .4 percent in the opposite direction.
3. Each 1 percent change in the per capita supply of chicken will have an effect on hog prices of .3 to .5 percent in the opposite direction.
4. Each 1 percent change in current dollar per capita disposable income will affect the price of hogs by .2 to .3 percent in the same direction.

Population growth also affects demand and prices. In general, each one percent population growth will add one percent to total demand and prices unless there are offsetting reductions in per capita demand.

In Exercise 10-2 you can forecast hog prices for the coming year based on the 8% variables.

Effect of the Farm to Retail Margin on Hog Prices

It takes approximately 1.7 pounds of live hog to yield one pound of retail pork. Thus a one cent change in the value of a pound of live hog translates into a 1.7 cent change at the retail level.

When retail pork prices rise as a result of larger margins at either the retail or packer level, purchases of pork are adversely affected. The higher margins are reflected back through the marketing system to producers in the form of lower bids on hogs. These changes in the spread from farm to retail price can be a major influence on live hog prices, but are difficult to forecast.

Seasonal and Cyclical Patterns

Forecasts of the hog market should also take into account the typical seasonal price pattern for hogs. Prices tend to be highest during the summer months and lowest during the early spring and fall. This reflects largely the seasonal variation in pork supplies, as well as some variation in consumer demand for pork. Sow farrowings tend to be lower during December-February than in other months of the year and somewhat higher during March-May. As a result, third quarter slaughter is normally the smallest of the year and fourth quarter slaughter is seasonally large. Usual seasonal price patterns may not occur, however, when there are major cyclical changes in production.

The cyclical pattern of hog production and prices occurs because producers respond to price, cost and profit conditions. They expand production following periods of impending profits, and cut back production following periods of expected losses. The stage of the production cycle in which the pork industry finds itself is a good predictor of future prices.

Longer Term Forecasts

Market forecasts of hog prices that extend beyond approximately 12 months require estimates of likely production changes. How will the industry respond to current and expected profit conditions or to other influences on production decisions? The hog-corn ratio is often used as an indicator of profitability, since corn is one of the largest costs for hog production.

The hog-corn ratio is simply the bushels of corn required to equal the value of 100 pounds of live hog or, the price of hogs in dollars per hundredweight divided by the price of corn in dollars per bushel. The level of the ratio that represents a profitable situation varies with the price of corn. Assuming other costs do not change, it takes a higher hog-corn ratio to generate profits when the corn price is relatively low. A ratio of 15 based on $3.00 corn, for example, would represent a more favorable profit situation than a ratio of 15 based on $2.00 corn.

Figure 10-1 shows the relationship between the hog-corn price ratio and the change in sow farrowings two quarters later. Historically, the hog-corn ratio has been a useful, though not precise, indicator of likely change in sow farrowings. A hog-corn ratio that represented a profitable situation in relation to total production costs has usually been

followed by an expansion in sow farrowings. Unfavorable profits have usually led to declines in farrowings.

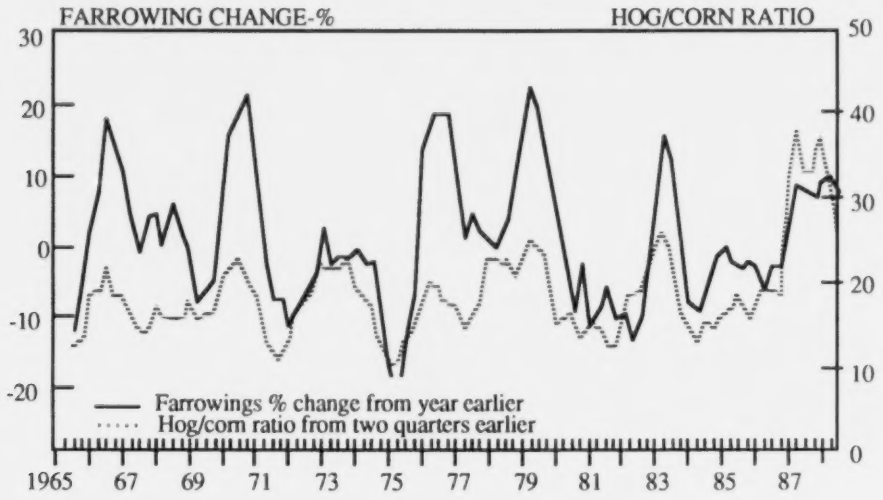


Figure 10-1. Farrowing change and hog/corn price ratio

FUNDAMENTAL ANALYSIS OF THE CORN MARKET

Fundamental factors are those affecting the supply of and demand for farm products such as corn. Over a period of 3 to 12 months fundamental forces will largely determine the direction of price changes. But day-to-day and week-to-week movements are also influenced by technical factors. In addition, political influences affect the range within which grain prices fluctuate. Such policy variables as price-support loan rates, reseal loans, export assistance programs, government purchasing operations and export controls become extremely important pricing factors in years of exceptionally large or exceptionally small crops. When supply changes are less extreme they are less important than fundamental and technical factors.

Accurate price analysis requires a knowledge of the quantitative relationships between changes in domestic supplies or exports and resulting changes in grain prices. Equally important is a knowledge of where to obtain accurate, timely information on production, weather conditions, domestic stocks, exports and other indicators of U.S. and foreign supply and demand.

Economic Relationships in the Corn Market

Three major fundamental factors affect corn prices: (1) domestic feed use, (2) available corn supplies, and (3) exports. Domestic use is by far the largest outlet for corn, and domestic corn feeding is where much of the adjustment to extreme changes in production occurs. In analyzing the corn market, special attention should be paid to the strength of domestic demand and how rapidly U.S. livestock and poultry industries will adjust to changes in grain prices.

Domestic Corn Feeding

An often overlooked point in analyzing **domestic demand for corn** is that feed use is determined by the grain feeding rate per head as well as the total number of livestock and poultry being fed. Feeding rates per animal are influenced by the cost of feed, amount of protein meal fed, livestock profitability, changes in feeding methods and technology, and weather conditions.

Data on animal numbers and feeding rates are published periodically in USDA's Feed Situation and Outlook Report. Analysis of the domestic demand for grain is based heavily on projections of grain feeding rates and grain consuming animal units for the year ahead. An animal unit is a measure used to describe feed demand. It is a statistical conversion of various classes of livestock and poultry into the equivilent to one dairy cow. Animal unit projections are based on recent farrowings, farrowing intentions, numbers of cattle currently on feed, and general indicators of livestock feeding profitability.

Grain Stocks Reports and Quarterly Grain Use

USDA's quarterly grain stocks reports provide the only available indication of how much grain is being fed domestically. These reports are released in January, March, June and September, and are based on nation-wide surveys of grain in storage on and off farms at the beginning of each of these months. Since domestic feed usage makes up such a large part of the total demand for corn, the stocks reports are major market indicators and at times can signal sharp changes in price trends.

To use the stocks reports effectively in price analysis it is important not only to know what levels of stocks the trade is anticipating when the report is released but also have your own idea what level of domestic feeding and corn stocks are most likely to be shown by the report. If reported stocks are moderately above trade expectations, the report likely will be bearish (causing prices to decline). A bull market results when stocks are below expectations. If your local elevator has a market news wire service, the manager should be able to tell you a day or two ahead of the report what the trade expects it to show. Such information also can be obtained from newsletters of commodity brokerage firms, although the changes are often in the market before the newsletter reaches you.

Feed usage is computed by subtracting exports, processing and seed use, and ending stocks from supplies at the start of the quarter. This information is not contained in the report, but can be calculated from the stocks data and other information. Exports during the quarter can be obtained from Grain and Feed Market News. Processing and seed use can be approximated by looking at such uses in the same quarter of the preceding year (from USDA Feed Situtation and Outlook Report) and projecting a trend increase for the current year.

Grain Exports

Projection of corn exports is complicated by a lack of precise information on foreign livestock profitability, overseas grain stocks, production and production prospects. These problems obviously are greatest in projecting foreign demand 12 months or more into the future, when the size of upcoming crops is not yet known. For the current crop year, export projections can be based on six major types of information:

- season to date exports
- required weekly average shipments to meet USDA projections vs. weekly average

exports in the same period a year ago
•foreign grain production in the Northern Hemisphere
•production prospects foi the spring-harvested Southern Hemisphere crops
•assessment of any unusual factors in last year's export patterns
•exports by country of destination in recent years

How Domestic Supply Changes Affect Corn Prices

Research indicates that each one percent change in the U.S. corn supply will change corn prices by approximately two percent in the opposite direction, if all other market influences remain constant. This relationship shows how sensitive corn users are to price, and how much price change is required either to absorb larger supplies or to ration reduced supplies.

To illustrate how the relationship can be used in price forecasting, assume this year's corn supply is placed at 10,615 million bushels, 7 percent above last season. Assume total utilization is projected to rise by 270 million bushels this season, reflecting the combined effect of increased domestic livestock numbers and slightly larger exports. Deducting the 270 million bushel increase in demand from beginning supplies leaves a net supply increase of 4 percent. Assume last season's U.S. average price received by farmers was $2.25 per bushel. Using the ratio of 1 % increase in corn supply to a decrease in corn price of 2%, a 4% increase in supply would lower the predicted corn price by 8%, or $.18, to $2.07 per bushel. The larger supply this season would then need to be adjusted to your local area. For example, prices in central Iowa would likely run about 10 cents below the U.S. average farm prices, or in the case above, about $1.97 per bushel.

Keeping Up to Date on U. S. Crop Prospects

USDA's planting intentions reports and monthly crop reports during the growing season provide a useful base for forecasting the next season's grain and oilseed production. These reports are made by USDA's Agricultural Statistics Service and are based on nation-wide surveys of producers, as well as objective yield estimating techniques during the late summer and fall. The objective yield procedures involve scientific samples of fields, counts of plant populations, numbers of ears or pods, size of ears, rainfall levels, fertilizer use, planting data and eventually harvesting, shelling, drying and weighing of ears or pods from sample areas. The work is carried out by career civil service staff rather than political appointees and is not subject to political influence by the prevailing administration.

Estimates and forecasts by the USDA National Agricultural Statistics Service (NASS) should not be confused with crop projections made prior to the growing season by USDA's Economic Research Service (ERS). The ERS projections reflect intended acreage and specific assumptions about potential yields. These yield projections are not based on actual field surveys and should not be considered as forecasts of production. The projections usually are made to illustrate how alternative yields would affect the supply-demand balance for various crops. When the ERS makes such projections, they are usually issued during the April-June period before NASS crop forecasts are available.

Two cautions should be pointed out in using the NASS reports. First, the planting intentions reflect intended plantings at a specific point in time. Those intentions can and often do change due to weather and economic influences. In years when sizable shifts in acreage have occurred, the planting intentions have generally tended to understate the actual changes.

The second caution is that the NASS crop production forecasts reflect crop conditions at a particular point in time, usually about the beginning of the month in which they are released. For price forecasting, it is necessary to continuously monitor growing conditions across the U.S. grain belt and to estimate how yield prospects have changed after NASS released its monthly crop forecasts.

The Weekly Weather and Crop Bulletin published jointly by the NASS and the National Weather Service is extremely useful in monitoring weekly changes in weather and crop conditions. This report contains national rainfall and temperature maps each week and summaries of crop conditions by states. It also contains percentages of spring and fall fieldwork completed, harvesting progress, percent of the crop tasseling, setting pods, silking and average height, and comparisons with the previous year and normal progress for that particular week. In addition it contains 30-day U.S. and Canadian weather forecasts, drought index maps, and monthly rainfall and temperature maps for major foreign grain growing areas. This report can be very useful to anyone seriously attempting to analyze corn and soybean markets. Various private reports from the grain trade and producer organizations may also help in judging changes in the crop potential during the growing season.

FUNDAMENTAL FACTORS AFFECTING THE SOYBEAN MARKET

Factors that are used in analyzing the soybean market are similar to those for corn, except that supply and demand projections involve an analysis of two products--soybean oil and soybean meal. There is a wide range of competing products to consider, particularly for soybean oil.

For analytical purposes, the oil and meal demand each need to be divided into domestic and export sectors. Domestic meal demand is influenced by many of the same factors as corn demand, including livestock numbers, livestock profitability and availability of other high protein feeds. Domestic soybean oil demand is influenced to some extent by the level of employment and general economic activity. The sensitivity to general economic activity is due at least in part to heavy use of soybean oil at fast food restaurants, where demand is affected by changing levels of consumer income. However, availability of competing fats and oils is an even more important influence on the demand for soybean oil.

In the export markets, long-term trends and availability of competing products are key factors used for demand forecasts.

Domestic Meal Demand

Domestic soybean meal use is determined by the number of animals being fed and the average protein meal feeding rate per animal unit. As with corn, meal feeding rates vary considerably in response to fluctuations in meal prices and livestock profitability.

Animal units used in analyzing soybean meal demand are high-protein consuming animal units and contain a slightly heavier weighting for poultry than the grain-consuming animal units. These units also are published periodically in USDA's Feed Situation and Outlook Report.

To determine this season's allowable level of domestic soybean meal feeding, it is necessary to first project soybean protein exports as beans and meal. The remaining

supplies minus minimum needed pipeline carryover stocks is the amount available for domestic feeding.

Analyzing Soybean Protein Exports

Exports of soybean meal and beans are less responsive to price than is domestic use. Therefore, they can be projected largely by use of trend lines, foreign needs, availability of foreign oilseed meals and season-to-date U.S. exports. Export data can be obtained from USDA's Oil Crops Situation and Outlook Report.

Analyzing Soybean Oil Use

Domestic soybean oil use has shown an irregular upward trend with some year-to-year variation in use. To analyze these year-to-year changes, domestic use of soybean products is computed by subtracting exports and ending stocks from production and beginning stocks. The stocks used in these calculations are reported by the Census Bureau and reflect supplies held only by processors and refiners. Thus, changes in other wholesale, retail and consumer stocks would also affect apparent consumption. A buildup of unreported inventories at these levels would overstate actual consumption, while stocks reductions would understate consumption.

Domestic soybean oil use figures are derived from census production and export reports released near the beginning of each month. Reliable commodity brokers should be able to provide this information as well as palm oil and coconut oil import data .

Soybean Oil Exports

Major competitors of soybean oil exports include cottonseed, rapeseed, sunflower seed, olive, palm, coconut and peanut oils, lard, butter and Brazilian soybean oil. Forecasting U.S. exports involves analysis of trends in production of these competitors. Reports on weather and crop conditions in producing countries are available from USDA and some commercial commodity news sources. Estimates and projections of production can be obtained from regular issues of USDA's Foreign Agriculture Circular.

World Oilseed Situation and Market Highlights

U.S. soybeans face competition from soybean crops in Brazil and Argentina, as well as from rapeseed in Canada, and both sunflower seed and rapeseed in the European Community. These are the most important competitors in the world protein and oilseed markets, although a number of other oilseeds can also affect soybean prices. South American soybeans are planted from late October through December, since the Southern Hemisphere growing season is reversed six months from the U.S. The beans are harvested from March through late April, with peak South American export movement usually running from early June through September. South American soybean production expanded rapidly from the mid-1970's through the late 1980's. Normal production there is about 60 percent as large as in the U.S., although South American total exports of beans and bean products now are nearly equal to those of the U.S. because a smaller share of the crop is used domestically.

Fundamental analysis, a combination of assessing the forces which influence supply and demand coupled with subjective judgement, is the most common approach to forecasting prices. Per capita supplies of livestock, demand for meat and competing products, and the

retail spread are all considerations in predicting livestock prices. Forecasting the price of grain based on those fundamental factors which influence supply and demand include evaluating the effects of weather conditions, government farm policies, domestic stocks, exports, and foreign production.

While some use fundamental analysis through the use of supply and demand factors in order to predict market movements and forecast prices, others rely on a different approach called technical analysis.

TECHNICAL ANALYSIS

Technical analysis makes use of various charting tools and rules to forecast short-term price behavior. These tools include moving averages of futures prices, bar charts, point and figure charts, volume and open interest in the futures market, price cycles, and rules to interpret chart patterns. Computer software programs may be used to facilitate data collection and interpretation for technical analysis. Some analysts do their own charting, or follow commercial data screen charts while others are comfortable with weekly charting service charts.

Futures prices tend to follow accepted rules of charting and other technical analysis tools because those rules are understood and used by a large number of professional traders. Trading actions that are based on the rules cause the rules to work.

Technical analysis can be used to guide market timing and forecast short-term price movements. It can also be a guide for hedging, cash contracting, lifting hedges, and placing stop orders.

CHARTING WITH BAR CHARTS

Bar charts are the most widely used of all technical analysis tools. To understand technical analysis, it is helpful to understand the preparation and interpretation of bar charts.

The most common type is the daily bar chart, where prices for a particular contract month are plotted as a vertical bar. The top of the bar represents the high price for the day, the bottom is the day's low, and a small horizontal line on the right side, called a tic, is the closing price, as shown in Figure 10-2. Bar charts are also prepared using weekly or monthly data, depending upon the intended use. The same general procedure is used for weekly or monthly bar charts. For example, the bar representing a month would plot the monthly high, low and month-end settlement price.

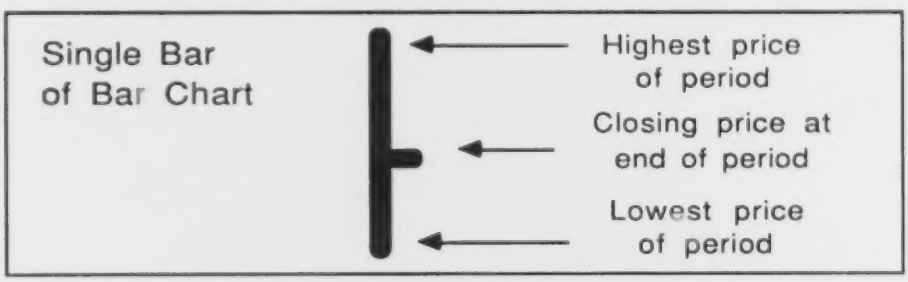


Figure 10-2. Bar showing high, low, and close.

Channel Lines

When prices have been plotted over a period of several days or weeks, the price trend can be identified by channel lines. If price trends are up, the base of the channel is drawn as a straight line just touching the two **lowest** possible points on the price movement. The upper channel line is then drawn parallel to the base and just touching the highest price in the series being charted, as illustrated in Figure 10-3.

If prices are trending downward, the first channel line should be a straight line just touching the two **highest** possible prices in the series. The lower channel line is drawn parallel to the top line and just touching the single lowest price of the series being charted. As long as prices are within the two channel lines, the price trend remains intact.

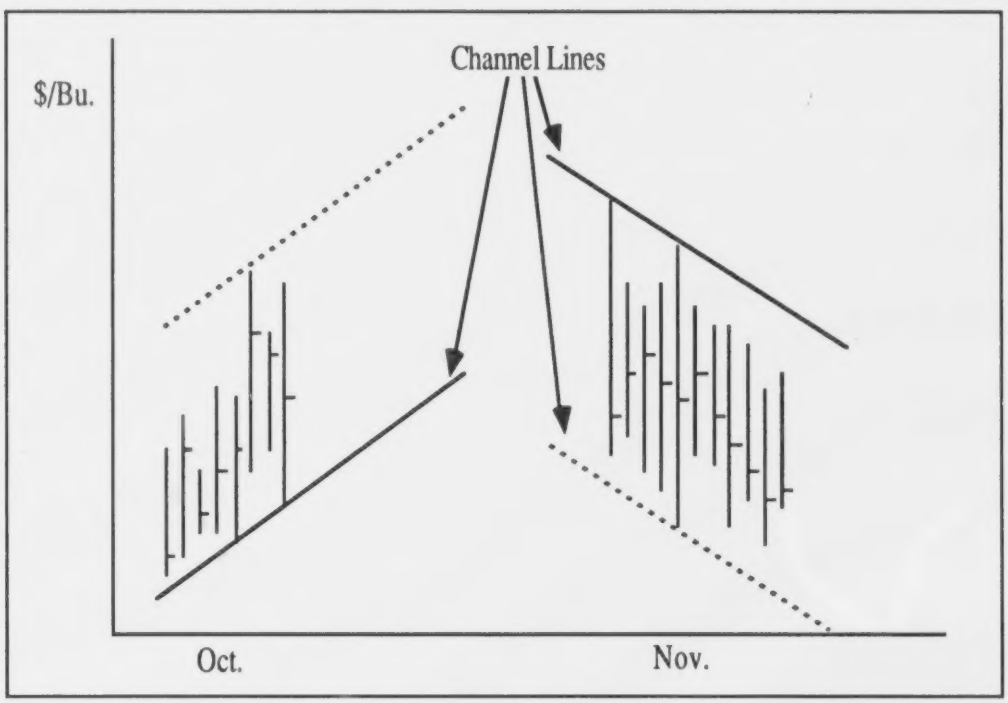


Figure 10-3. Channel lines.

Buy and Sell Signals

Professional commodity traders watch the charts for signs of a change in the direction of price movements. One close below the channel is a signal that prices may work lower and is a sell signal for the professional speculator. Figure 10-4 shows a sell signal, with the future price closing below the bottom of the channel line. Figure 10-5 shows a buy signal, **two closes** above the channel line. That is a strong indication that prices are about to begin moving higher.

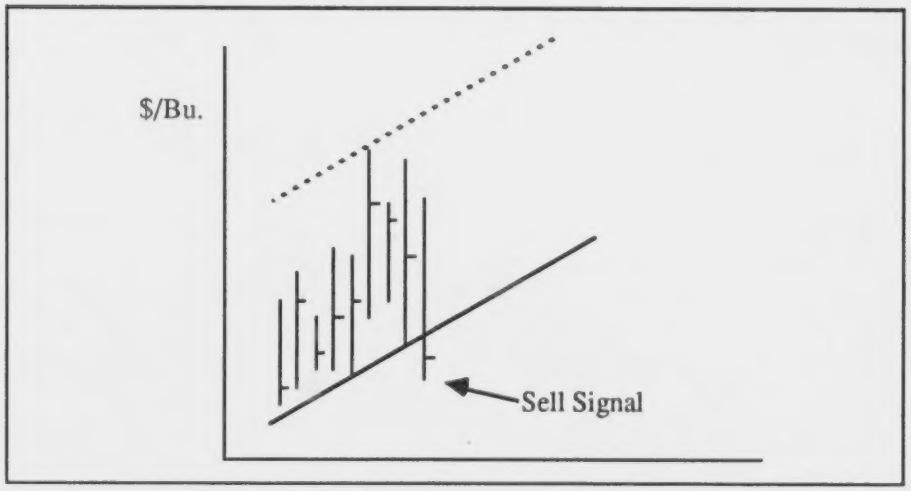


Figure 10-4. Chart showing sell signal.

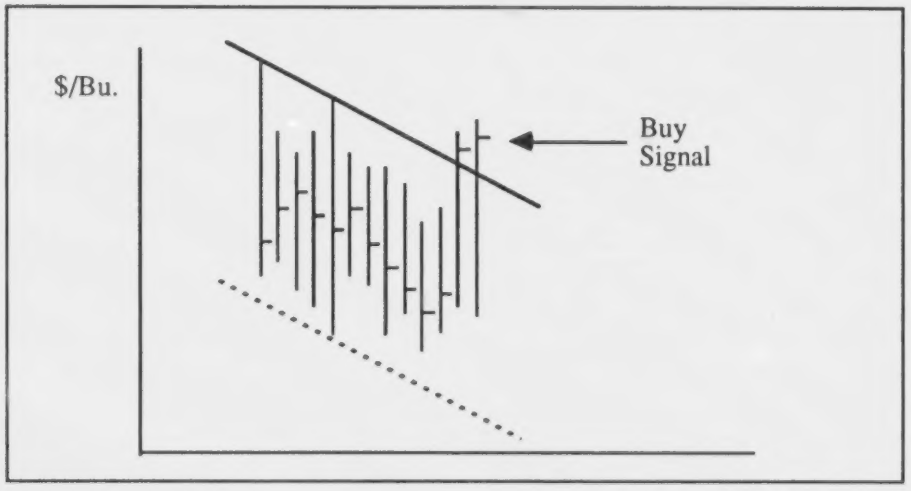


Figure 10-5. Chart showing buy signal.

Key Reversal or Outside Day Key Reversal

A key reversal is identified by daily high and low prices that exceed the high and low prices for the previous two trading days. With a bearish key reversal, the close is below the closing prices of the previous two days. Figure 10-6 shows a bearish outside day key reversal. This information is a caution sign that prices may begin to work lower. A key reversal would be bullish, indicating higher prices, if the close exceeded closing prices for the previous two trading days. Key reversals often appear near the top or bottom of an extended price move.

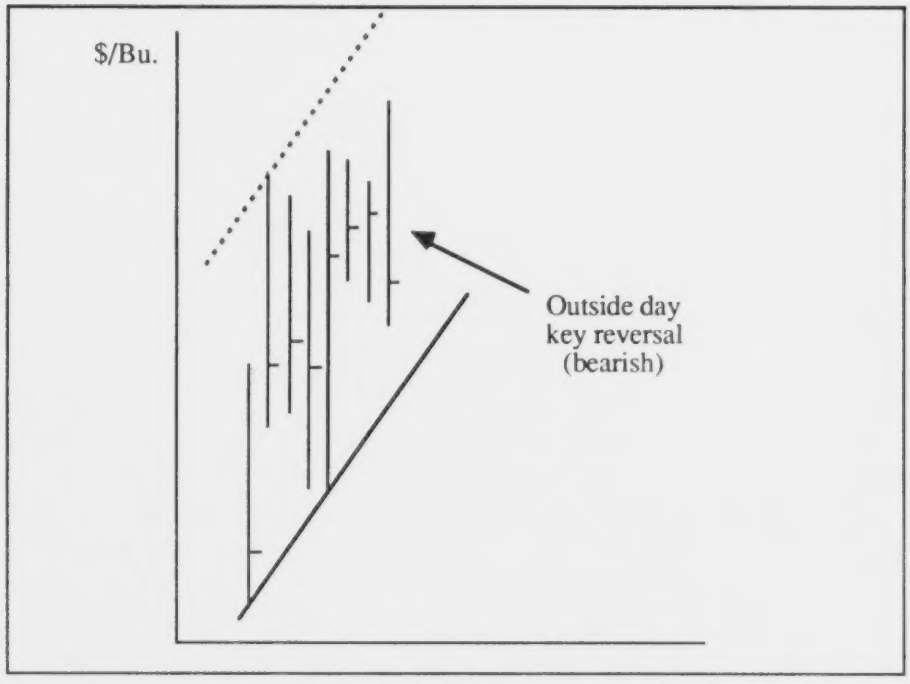


Figure 10-6. Outside day key reversal.

Gaps

A gap occurs when futures prices suddenly drop, with the high price for the day being below the previous day's low or with prices moving abruptly higher with the day's low exceeding the previous day's high. Examples of gaps are shown in Figure 10-7. Trading rules and trading history indicate that gaps will eventually be filled. A gap is filled if prices later trade in the range at which the gap occurred. Since gaps are usually filled, they become price objectives for the chartist who is considering either speculative or hedging trades in the market.

There are several important kind of gaps. **Break-away gaps** like those shown on Figure 10-7 occur at the start of a major new price move and are a strong confirmation of that move if they are not filled within the next few days. **Measuring gaps** identify the half-way point in a price move, but are much easier to identify from hindsight than from foresight. **Exhaustion gaps** represent the final phase of a lengthy price move and may indicate the market is about to peak out. When an exhaustion gap closes it could be signaling downward price movement.

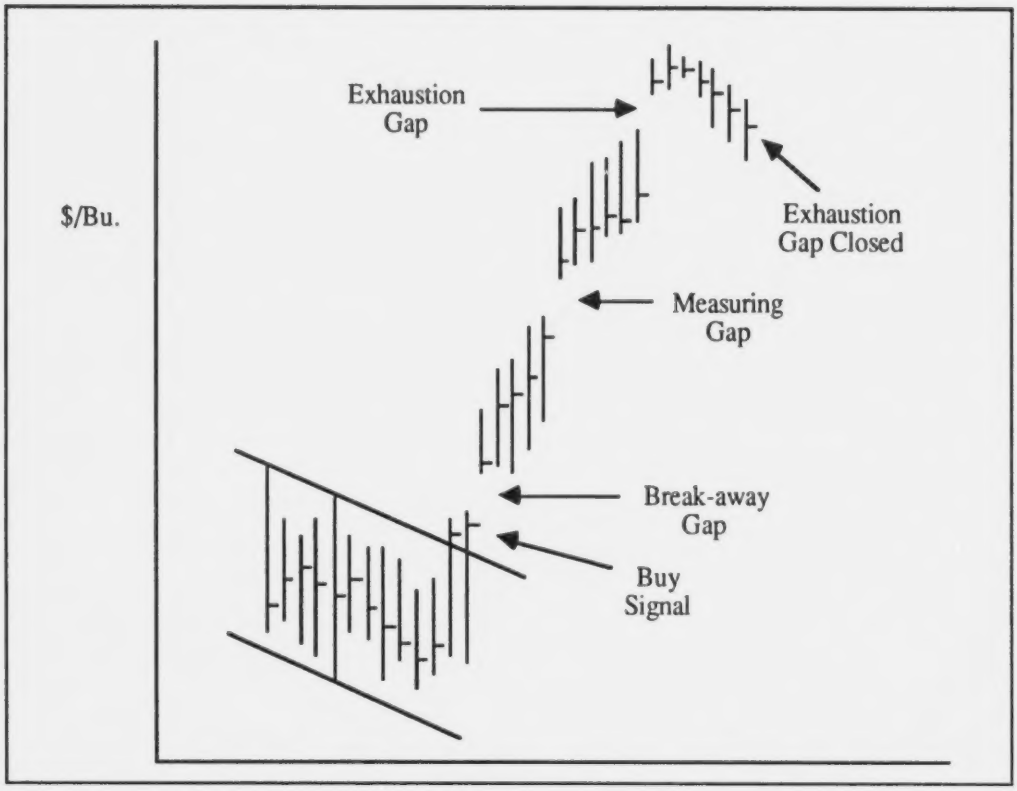


Figure 10-7. Chart with break-away, measuring, exhaustion gaps.

Double Tops and Double Bottoms

Figure 10-8 shows a double top formation, indicating prices have reached their peak and are about to decline. Double bottoms are the inverse of double tops and indicate prices may be ready to change from a down-trend to an up-trend. Triple tops and bottoms are even stronger indications of a potential change in price trends.

Head and Shoulders Formation

A typical head and shoulders formation is shown in Figure 10-9. This formation is difficult to spot until it is about two-thirds completed. Once the head has been formed, the chartist anticipates prices will retreat to the neckline, then rise to form the right shoulder, then retreat to the original break-out level where the left shoulder began. These various signals can be guides to price forecasting and price action for individuals who understand and have confidence in their own interpretation of them.

USES AND LIMITATIONS OF CHARTING

Charting is a useful market tool in deciding when to sell. You may watch for gaps on the charts to help you establish price goals. However, charts are not necessarily the full answer to your marketing needs.Effective crop and livestock marketing requires information

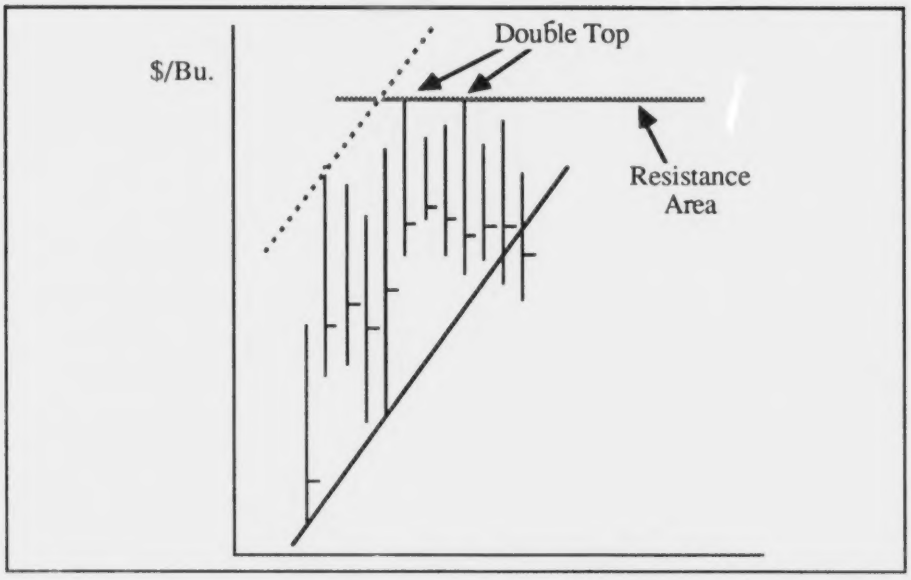


Figure 10-8. Chart showing double top.

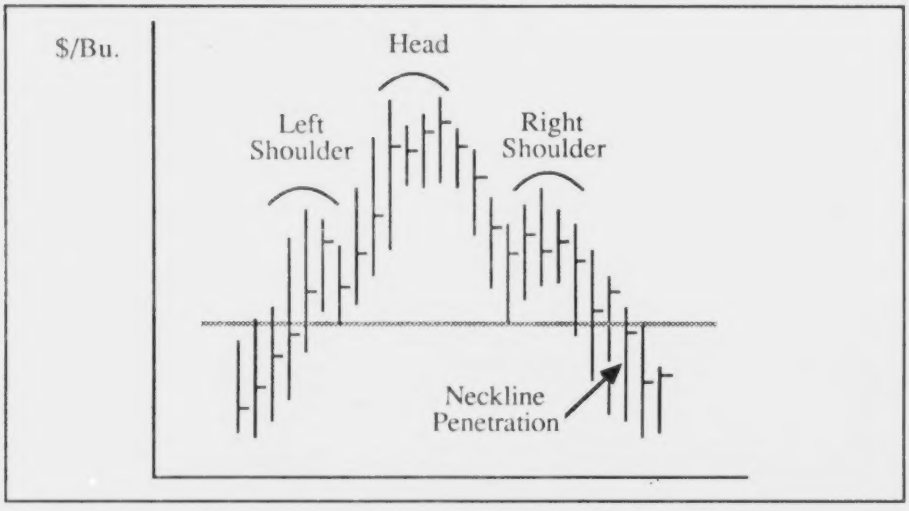


Figure 10-9. Head and shoulders formation.

about supply and demand conditions in the United States and around the world in order to accurately evaluate price prospects several months into the future. Charts are oriented toward short-term price movements because they were developed by professional speculators trading in and out of the market for short-term gains. Several sources of technical information are listed in the appendix.

Both fundamental and technical analysis can help you project price levels and trends. Combining both kinds of analysis may be particularly helpful. Fundamental analysis will

provide an indication of the general price level that can be expected over intermediate time periods, while technical analysis may be especially helpful in forecasting futures market price trends and short term or current price movements and in making decisions about forward pricing.

To market your products successfully you should have accurate records of your costs of production and storage, and carefully assess your financial risk-bearing ability. Forecasting prices becomes the foundation of your marketing endeavors. In addition, you need a working knowledge of the available pricing tools including forward contracts, delayed price contracts, basis contracts, and direct hedging in the futures market. Available livestock and grain marketing tools will be covered in subsequent marketing units.

V. SUMMARY

Making sound decisions about selling and pricing agricultural products for current or future delivery may make the difference between losing money or making a profit. Prices fluctuate seasonally and cyclicly as well as being influenced by national and international livestock and crop conditions, supply, and demand. Studying factors which influence supply and demand will help you forecast prices. By calculating your costs of production, you can establish your own goals for acceptable prices for your grain or livestock within the price expectations.

To forecast prices in the weeks or months ahead, you can use fundamental and/or technical analysis. Fundamental analysis consists of estimating future market supplies, supplies of competing products, demand for products, and the relationship between market factors and prices. In technical analysis, you forecast price trends from charts of commodity high, low, and closing prices over a period of time. Both methods are used to project price levels and trends.

Seasonal and cyclical patterns in livestock and grain production, amount of grain fed domestically, and the amount of grain kept in storage are all factors to consider in a fundamental analysis. In technical analysis, certain futures prices tend to follow accepted rules of charting. Those who use charting rules such as channel lines, key reversals, and other formations, generally interpret changes as signals to buy or sell depending on the forecast of when price changes are likely to occur.

As you study the market, there are numerous information sources and publications regarding crop and livestock prices, supplies, production, and other factors which influence the market. The most up-to-date market reports are provided on data screens such as Dataline and Agri-View. Radio reports are given throughout the day and daily reports are provided on financial pages of major newspapers. USDA has numerous publications to which you can subscribe or find at your local Extension office.

Agricultural marketing employs a vocabulary all its own. As you familiarize yourself with marketing terminology, you will become aware of the many tools available and the complex process which can be involved in marketing. As you move through this unit and other marketing materials, your efforts will be rewarded. You will increase your ability to forecast prices, to evaluate various tools for marketing your own livestock and grain, and finally, to make and carry out a marketing plan for your own operation. Dedication to improving your marketing skills could lead to greater returns for your family and your farming operation.

VI. APPENDIX: SOURCES OF MARKET INFORMATION

LIVESTOCK MARKET INFORMATION AND DATA SOURCES

The following is a partial list of information sources and publications on livestock prices, supplies, production, and related information.

Production and Inventory Estimates

The Agricultural Statistics Board, National Agricultural Statistics Service, USDA, releases a number of periodic reports on livestock production, marketing, and inventories.

Reports emphasizing Iowa data and a national summary are released by Iowa Agricultural Statistics, 833 Federal Bldg., 210 Walnut St., Des Moines, IA. 50309 (Phone 515/284-4340).

More detailed reports covering the individual states and the U.S. are released by the National Agricultural Statistics Service in Washington, D.C. A subscription order form covering all available reports can be obtained from Agricultural Statistics Board Publications, Room 5829 South Building, USDA, Washington, D.C. 20250.

Livestock related reports available from the National Agricultural Statistics Service in Washington include:

Cattle
Cattle on Feed (monthly for 7 states; quarterly for 13 states): cattle on feed, placements, and marketing.

Cattle inventory estimates by class; calf crop (January 1 and July 1). Cost: $14.00 per year for all cattle reports.

Hogs
Hogs and Pigs Report (quarterly for 10 states; January and June for U.S.): hog inventories, pig crop, farrowing, and farrowing plans. Cost: $20.00 per year.

Livestock Slaughter (monthly and annual) - number slaughtered by species and class, average live weight, carcass meat production. Cost : $20.00 per year.

Milk Production
Milk production, U.S. and major states (monthly) - cow numbers, production per cow and total production.

Milk: Production, Disposition and Income (annual). Cost: $13.00 per year for both reports.

Livestock reports from Iowa Agricultural Statistics are published in a single periodical called Iowa Livestock Report which highlights all of the major livestock reports, including cattle on feed, cattle inventories, hogs and pigs, livestock slaughter, milk production, eggs, and turkey production. Approximately 17 issues per year; Cost: $10 per year. To order, contact Iowa Agricultural Statistics.

Current Market News Reports

Livestock, Meat and Wool Market News - a weekly statistical summary of livestock supplies, market activity, and prices covering most major livestock markets and direct marketing areas. Available from Agricultural Marketing Service, Livestock and Grain Market News, USDA, Room 2623-South Agriculture Building, Washington, D.C. 20250. Cost: $45.00 per year.

Livestock Market Summary - a weekly report on the slaughter livestock market in Iowa and Southern Minnesota, feeder livestock in Iowa, the Midwest carlot meat trade and Iowa grain prices. Available from the Agricultural Marketing Division, Iowa Department of Agriculture and Land Stewardship, Wallace Building, Des Moines, IA 50319. Cost: $5.00 per year.

The Chicago Mercantile Exchange -a daily information bulletin on commodities traded on that exchange. Included is information on futures contract and option prices, trading volume, and open interest. Available on a subscription basis from the Statistical Department, Chicago Mercantile Exchange, 30 South Wacker Drive, Chicago, IL. 60606.

Radio, Newspaper and Code-a-Phone - Radio, television, code-a-phone and telephone are timely sources of current market information. Most daily newspapers are also good sources of market information. In addition to your local radio and television stations, WOI-AM 640, the Iowa State University radio station, carries an extensive schedule of market news throughout the day. Current livestock and grain information is also available on code-a-phone from Iowa State University at any time of the day or night by calling: 1-515-294-6899 for slaughter livestock and meat reports and 1-515-294-6911 for grain and livestock futures price.

AGRI-VIEW (Agricultural Text Service) - a television market and information service offered by Iowa Public Television and Iowa State University. Information is transmitted on Iowa Public Television signals and appears on the TV screen in full page printed or "text" form. Information is updated regularly, and is available throughout the day and evening. There is no charge for the service, except the initial cost of a television converter needed to receive this specific signal. For more information, call 515-294-8999.

Extension's Computer Network (EXNET) - Information can be received on your home or business computer via phone lines and modem. You can access current USDA market reports, AGRI-VIEW reports and releases by extension specialists at Iowa State University. Telephone toll charges to ISU are an additional cost. For information, contact EXNET, 103 Bessey Hall, ISU, Ames, Iowa 50011 (515-294-8658). Cost: $25 annual subscription fee.

Market Analysis and Outlook Information

Published reports containing analysis of livestock market conditions, basic supply and demand information, and forecasts of future market conditions are available from many public and private sources. These include:

Iowa Farm Outlook - published twice monthly by the Cooperative Extension Service, Iowa State University. For subscription information, write Iowa Farm Outlook, 468 Heady Hall, ISU, Ames, IA 50011. Cost: $7 a year.

Livestock and Poultry Situation and Outlook Report - published 6 times a year by the Economic Research Service, USDA, Washington, D.C. 20250. Situation reports, covering other commodities, including the ***Dairy Situation and Outlook and Feed Situation and Outlook*** are also available from the same source. Order from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Cost: $8.50 per year.

Agricultural Outlook - published 11 times a year by the Economic Research Service, USDA. Write to USDA/ERS, P.O. Box 1608, Rockville, MD 20850. Cost: $22.00 per year.

Commercial Services - livestock market analysis and outlook information is available from a number of commercial sources. These include Cattle Fax, Pro Farmer, Farmers Grain and Livestock, Top Farmer, The Brock Report, The Helming Group, Doane's Agricultural Report, Agri-Visor, brokerage firm newsletters, magazines such as *Beef, Hog Farm Management, Farm Journal, Successful Farming, Wallace's Farmer,* and others.

GRAIN MARKET INFORMATION AND DATA SOURCES

The following is a partial list of publications and information sources on grain and livestock production, inventories, exports, marketing and prices available from the U.S. Department of Agriculture and other sources.

Production and Inventory Estimates

The National Agricultural Statistics Service, USDA, releases a number of periodic reports on grain production, marketing, inventories and other data estimates.

Reports emphasizing the Iowa data and a national summary are released by the Iowa Agricultural Statistics, 833 Federal Building, 210 Walnut St., Des Moines, IA 50309.

More detailed reports covering individual states and the U.S. are released by the National Agricultural Statistics Service in Washington, D.C.

Grain related reports available from Agricultural Statistics Service in Washington contain national and individual state estimates on production, stocks, marketing, and prices for a wide range of farm products. These reports include:

Crop Planting Intentions (March)
Crop Production (monthly estimates of production during the growing season)
Grain and Soybean Stocks (quarterly)
Agricultural Prices (monthly)

Reports available from Iowa Agricultural Statistics include:

Iowa Crop Report - Highlights all of the major acreage, production and stocks reports of concern to Iowa producers; approximately 11 reports per year. The cost is $10.00 per year.

Iowa Crops and Weather - Information on crop progress throughout the growing season, moisture supplies, and weekly temperature and precipitation data. The cost is $12.00 per year.

Agri-News (monthly) - Highlights prices paid and received by farmers and provides capsule summaries of other reports released during the month. The cost is $10.00 per year.

To order any of the above Iowa reports, contact Iowa Agricultural Statistics, 833 Federal Building, 210 Walnut Street, Des Moines, Iowa 50309 (Phone 515/284-4340).

Market Situation, Analysis and Outlook Information

Published reports containing analyses of grain and livestock markets, basic supply and demand information and forecasts of future market conditions are available from the U.S. Department of Agriculture and other public and private sources.

Reports available from the Economic Research Service in Washington contain background information and current and historical data and information on the commodities and topics indicated. The Outlook and Situation Reports contain information on prospective supply, demand and price conditions. Unless otherwise indicated, these publications are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. To obtain information on all available reports and current subscription charges, write to Reports, USDA-EMS Information, Room 237, 1301 New York Avenue, Washington, D.C. 20005-4788.

Situation and Outlook Reports:

Feed (2 times per year plus an annual yearbook) - Discusses the supply, demand and price situation and outlook for corn, oats, grain sorghum, barley, roughages and high-protein feeds.

Oil Crops (2 times per year plus an annual yearbook) - Discusses supply, demand price situation and outlook for soybeans, soybean oil, soybean meal and other oilseeds and products.

Wheat (2 times per year plus an annual yearbook) - Discusses the supply, demand and price situation and outlook for wheat.

Other ERS reports include:

World Agriculture (4 times per year) - Discusses world economic and agricultural conditions and prospects.

World Agricultural Supply and Demand Estimates (12 times per year) - Contains U.S. and world balance sheets for grains, soybeans, soybean products and projected production, and prices of major livestock and poultry products.

Agricultural Outlook (11 times per year) - Discusses the agricultural situation, farm income, world agriculture and trade and price trends, marketing margins, supply, demand and market outlook for major agricultural commodities.

Reports available from the Foreign Agricultural Service in Washington include:

Foreign Agriculture Circulars - Available for a number of commodity groups, including (a) Dairy, Livestock and Poultry, (b) Grains, and (c) Oilseeds and Products; also available is a more general foreign agriculture report, ***World Agricultural Production***. Subscription information can be obtained by writing to the Foreign Agriculture Service, Information Division, Room 4644-S, U.S. Department of Agriculture, Washington, D.C. 20250.

U.S. Export Sales (weekly) - Shows grain exports to date, outstanding sales contract by country of destination and indicated season total sales for the marketing year. Available from Foreign Agricultural Service, Room 5965-S, U.S. Department of Agriculture, Washington, D.C. 20250.

Twice monthly from the Cooperative Extension, Iowa State University, ***Iowa Farm Outlook*** is available at a subscription charge of $7 per year. Emphasis is on fundamental analysis of markets for corn, soybeans, hogs and cattle.

Market analysis and network information is available from a number of other public and private sources. The Cooperative Extension Service at many land-grant universities publishes economic and market analysis newsletters, as do some of the Federal Reserve banks.

Current Market News Reports

The Livestock Division, Livestock and Grain Market News Branch, Agricultural Marketing Service, USDA publishes weekly statistical reports on grain and livestock supplies, market activity, prices, etc. covering most major grain and livestock markets and direct marketing areas. The major report relating to grain activity and prices is:

Grain and Feed Market News - A weekly summary of gulf, Great Lakes shipping and other statistics. Available from Agricultural Marketing Service, Livestock and Grain Market News, USDA, Washington, D.C. 20250. Cost: $45 per year.

Radio, newspaper and code-a-phones as well as electronic and computer information systems are available to receive current market information. Examples are listed in the previous section on livestock market information and data sources.

Other Reports

Weekly Weather and Crop Bulletin (weekly) - This report contains weekly U.S. rainfall and temperature maps, 30-day weather forecast maps for the U.S. and Canada, U.S. drought index maps at various times during the year, and monthly rainfall and temperature maps for major foreign grain producing areas. It also contains weekly reports on fieldwork progress, crop conditions, harvesting progress, pasture conditions, etc. for individual states. It is available from NOAA/USDA Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, D.C. 20250. The subscription charge is $25 per year.

TECHNICAL INFORMATION

More detailed information on bar charts and other tools of technical analysis is available in the following publications:

"Technical Analysis and Commodity Price Charts," M-1226, Cooperative Extension Service, Iowa State University, December 1981.

"Charting," Agridata Resources Inc., 330 E. Kilbourn Avenue, Milwaukee, WI 53202.

"Professional Hedging Handbook," Professional Farmers of America, 219 Parkade, Cedar Falls, Iowa 50613.

"Marketing for Farmers," Doane Publishing, 11701 Borman Drive, St. Louis, MO 63146.

"Guide To Technical Analysis," Merrill Lynch Commodities, One Liberty Plaza, 165 Broadway, New York, NY 10080.

VII. GLOSSARY

Embarking on the study of marketing means learning a new vocabulary. Marketing terminology is used in this unit and the upcoming units on livestock and grain marketing. Familiarizing yourself with the language of marketing will help you understand the market and how the market functions.

ACTUALS RATHER THAN: The commodities that are trading.

AT THE MARKET: A buy or sell order at the best price possible when the order reaches the trading floor.

AT THE MONEY: An option with a strike price equal to the current market price of the underlying futures contract.

BASIS: The difference in price between the futures price for a certain commodity and the cash price at a given location.

BASIS: The grade of a commodity.

BASIS CONTRACT: An agreement that sets the basis for a commodity. After the contract is entered, the seller chooses to price the basis sale. At that time, seller will receive the futures price minus the previously agreed upon basis.

BASIS RISK: change or variation in the basis.

BEARISH: The belief which anticipates lower market prices.

BID: An expressed willingness to buy a particular commodity at a specified price (see offer).

BREAK: A sudden decline in prices.

BREAKEVEN PRICE: The market price needed to just recover the costs of production. May be the most important detail in drawing up a marketing plan.

BULLISH: The belief which anticipates higher market prices.

BUY ON CLOSE: An order to buy within the closing price range at the end of the day's trading.

BUY ON OPENING: An order to buy within the opening price range at the beginning of the day's trading.

CALL OPTION: A contract giving the call option buyer the right, but not the obligaton, to buy a futures contract at a specific price premuim during a specific time period. The call option seller is obliged to sell futures to the call option buyer if the buyer exercises the option to buy.

CARRY: The amount the market will pay from one trading month to the next for future delivery of grain.

CARRYING CHARGES: The cost of storage of a commodity.

FULL CARRYING CHARGE MARKET: A situation in the futures market when the price difference between delivery months reflects the cost of interest, insurance, and storage.

CARRYOVER: The supply left or surplus of a commodity from the previous marketing season.

CASH COMMODITY: The actual product rather than a futures contract.

CASH FLOW STATEMENT: A financial form showing when revenues enter and when they are removed to cover expenses.

CASH MARKET: The market in which actual commodities are bought and sold. Refers not only to elevator companies and other producers buying a product, but also to the organized cash grain sales of commodity exchanges, central stockyards, and over-the-counter cash trading.

CHARTING: A part of technical analysis for forecasting price movements which analyzes past price behavior through the use of charts and graphs.

COMMISSION HOUSES: Brokerage firms which buy and sell futures contracts for customers. Their earnings come from commissions charged on trades.

COMMODITY: Any product traded on a futures exchange.

CONTRACT: An agreement between at least two parties. Usually involves a buyer and a seller and indicates specific obligations which can apply to both cash and futures markets.

COVER: Cancelling a short or sold position on the futures market by purchasing an equal quantity of the same futures contract.

CURRENT DELIVERY: The futures contract that will come to maturity and become deliverable during the current month. Also called spot month.

DAY ORDERS: An order to buy or sell at a certain price on a certain day of trading. Orders are generally considered day orders unless specified as open orders.

DELIVERY: The transfer of the physical commodity.

DELIVERY MONTH: The month in which a futures contract matures and delivery may be made or contract settlement made.

DELIVERY NOTICE: Notice of intent to deliver or request for a commodity under terms of a contract issued by the clearinghouse.

DELIVERY POINTS: The location to which commodities may be delivered to satisfy a futures contract.

EVEN BASIS: A condition which occurs when the local cash price is equal to the futures

price.

EXERCISE: The action taken when the holder of a call implements the purchase of the underlying futures contract, or by the holder of a put who takes action to sell the underlying futures contract.

EXERCISE PRICE: The strike price, the price at which the option can be exercised.

EXPIRATION: The date at which an option can no longer be exercised.

FIXED EXPENSES: Those expenses that exist regardless of the amount of production, such as land costs and living costs.

FORWARD CONTRACT: A cash market contract in which the seller agrees to deliver a specific quantity and quality of commodity to the buyer at a specified time and location for a previously agreed on price.

FUNDAMENTALS: Factors which affect the price of a commodity through supply and demand, such as weather and consumer tastes.

FUTURES CONTRACT: A contract traded on a futures exchange to make or take delivery of a standardized amount and quality of a commodity during a specific month which meets the exchange's terms at a price established in the trading pit.

FUTURES CONTRACT MONTH: The months in which futures contracts for a commodity are traded.

FUTURES MARKET: A centralized market where traders buy and sell futures contracts.

FUTURES PRICE: The price of a particular futures contract, determined by open competition between buyers and sellers on the trading floor of the exchange.

HEDGING: Buying or selling offsetting positions in order to provide protection against price changes, whether in the cash, futures, or options markets.

IN-THE-MONEY: A put is in-the-money if its strike price is above the current price of the underlying futures contract. A call is in-the-money if its strike price is below the current price of the underlying futures contract.

INTRINSIC VALUE: The dollar value which would be realized if a futures option were to be exercised immediately, as when puts or calls are in-the-money.

INVERTED MARKET: Futures market in which the nearby trading month contracts are worth more than those in later months.

LAST TRADING DAY: The last day for trading in a particular trading month. Unsettled contracts at the end of the last trading day must be fulfilled by delivery of the actual product.

LICENSED WAREHOUSE: An exchange designated warehouse where a commodity must be stored for delivery on a futures contract.

LIFE OF CONTRACT: The amount of time a contract is available for trade.

LIMIT: A set daily price beyond which the market may not rise or fall in one trading day.

LIMIT ORDER: A limit set by a customer on either price and/or the time of execution of a trade.

LIQUIDATION: Offsetting an existing position by selling an option which was previously purchased, or by buying back an option which was previously sold.

LIQUIDITY: The least cost at which one can enter and then close out a position.

LONG: A position which is established by purchase of a futures contract or an option if there is no offsetting position.

MARGIN: An amount of money deposited to guarantee the performance of a futures contract.

MARGIN CALL: Call from a brokerage firm to the customer to bring margin deposits up to the required minimum.

MARKET ORDER: An order to buy and/or sell at the best available price immediately.

MARKETING PRICE OBJECTIVE: The price a producer sets as an acceptable price for grain or livestock. The price should include fixed and variable costs, return to management, and a profit margin. Also called target price.

MATURITY: The period within which a futures contract can be settled by delivery of the actual commodity.

NEARBY DELIVERY MONTH : The futures contract closest to maturity.

NET POSITION: The difference between the open contracts long and the open contracts short held in any one commodity.

NOMINAL PRICE: The futures price quotation for a period when no actual trading took place.

OFFER: Willingness to sell a particular commodity at a given price (see bid).

OFFSET: Liquidating a position that is long or short. Also covering a short or long position by taking an opposite position in another futures month.

OPENING: Orders to buy or sell at the beginning of the trading day.

OPEN INTEREST: A count of open futures contracts of a given commodity. Those contracts that have not been fulfilled by delivery of the commodity or have not been offset by opposite futures transactions.

OPENING PRICE: The first price of trading at the beginning of the trading day.

OPENING TRANSACTION: A trade which establishes a new position.

OPTION: A right to buy or sell a particular futures contract during the life of the option at a specific price.

OUT-OF-THE-MONEY: A put or a call which has no intrinsic value at the current time. When a call has a strike price above, or a put has a strike price below the current futures price, it is said to be out-of-the-money.

OVERBASIS: A condition that exists when the local cash price is greater than the futures price.

OVERBOUGHT: A condition in which prices are thought to have increased too much or too rapidly.

OVERSOLD: A condition in which prices are believed to have declined too far or too rapidly.

PIT: The location on the trading floor where traders and brokers buy and sell futures contracts.

POSITION: Describes the position of a buyer (long position) and a seller (short position).

PREMIUM: The price of an option, as the price paid to an option seller for the right to buy or sell a futures contract at a specific price during the life of the option. The amount a given futures contract sells over another futures contract is also called a premium. Premium is also the additional payment an exchange allows for delivery of a commodity of higher than required quality against a futures contract.

PUT OPTIONS: A contract that grants the buyer the right, but not the obligation, to sell (go short) to the option seller at a specific price during a specific time period.

QUOTATIONS: The price of cash contracts or futures for any given commodity or time. Quotations are available through newspapers, television, and computer networks.

RANGE: The difference between the high and low prices recorded during a trading session or any given period.

ROUND TURN: Offsetting contracts by separate orders to buy and sell on the same day.

SELLER: One selling options. May also be known as the option writer or grantor. The sale may be to open or close a transaction. One who sells (goes short) on futures or options market.

SELLING HEDGE: Selling futures contracts to protect against possible decreased prices of commodities which will be sold in the future. Also known as short hedge.

SERIES: Options of the same class which share a common strike price.

SETTLEMENT PRICE: The mid-point of the closing price range.

SHORT: Selling a futures contract or option (go short) when there is no offsetting position.

SHORT THE BASIS: A position in which a person sells a cash commodity and buys futures thus locking in the basis. This seller retains ownership through buying futures, hoping to share in rising prices.

SPOT MONTH: The next futures trading month for a particular commodity. For example, the spot month for live cattle in March would be April.

SPREAD: Taking a position with both long and short options or futures with different month contracts or strike prices of the same commodity. The purpose is to exploit price differentials for disparities.

STRADDLE: Taking positions with both long and short options of the same commodity and strike price anticipating profits from volatile market prices.

STOP LOSS ORDER: A buy or sell order which becomes a market order when the price reaches the level mentioned in the order. The purpose is to limit losses.

STRIKE PRICE: The price at which the buyer of a put or call has the right to exercise the option.

SPECULATOR: A person who uses the futures or options market as a tool in a non-hedge position assuming full risk.

TARGET PRICE: Same as marketing price objective--the price a producer sets as an acceptable price for grain or livestock.

TAKE FUTURES: The process of buying futures to price a cash grain basis sale.

TECHNICAL ANALYSIS: Price forecasting that looks at historical information and uses charts and graphs to predict market movement.

TOTAL PRODUCTION COST: The sum of the fixed and variable expenses to produce a commodity.

TRADING LIMIT: The maximum price movement permitted in one trading session. Also the maximum futures market position anyone is legally permitted to own or control.

TRANSACTION: A market activity; a purchase, sale, or both.

TREND: The general direction of prices, either up or down.

TYPES OF OPTIONS: Either puts or calls.

UNDER BASIS: A condition existing when the local cash price is less than the futures price. Also called negative basis. Over basis exists when local cash price is more than the futures price.

UNDERLYING FUTURES CONTRACT: The specific futures contract that may be bought or sold by the exercise of an option.

VOLATILITY: The measure of the amount by which the underlying futures is expected to fluctuate in a given period of time.

VOLUME OF TRADING: The total number of futures transactions made in one trading session.

WEAKENING: Basis movement that occurs when the cash price is declining relative to the futures price over time. Also called widening the basis.

WRITING: The sale of an option in an opening transaction.

MARKET TIMING

Objective: To realize the impact of market volatility and timing on net farm and family income.

Situation: With considerable volatility in commodity prices, the timing of pricing and/or marketing can have considerable impact on income. Few people are either smart enough or lucky enough to sell at the year's peak price.

In 1987 Iowa prices during the year were as follows:

	Price Range	Lower Third of Price Range	Upper Third of Price Range
Corn, $/bu.	1.19-1.86	1.19-1.41	1.64-1.86
Soybeans, $/bu.	4.55-5.90	4.55-5.05	5.45-5.90
Hogs, $/cwt.	40.00-62.50	40.00-47.50	55.00-62.50

Assume you farm 440 acres, including 200 acres each of corn and soybeans, with normal yields of 130 and 40 bushels per acre respectively. You also market 1,000 hogs a year from a farrow/finish hog operation. The hog operation usually uses around 14,000 bushels of the corn crop. The balance of the corn crop and the soybeans are sold as cash grain.

Assume your total production costs for 1987 were calculated at $2.35 per bushel for corn, $5.25 per bushel for soybeans and $38 per cwt. for hogs, which includes the market value of the corn. Hogs are marketed at an average weight of 235 pounds.

Directions:

Part 1: On the worksheet compare total net receipts from the sale of corn, soybeans, and hogs, assuming sales were made at

(a) the mid-point of the lower third of the price range, and
(b) the mid-point of the upper third of the price range.

For corn, add $1.15 per bushel deficiency payment to the price received under both (a) and (b) above.

Price	- Costs	x Quantity	= Net

Corn Sales:

(a) $_____ - $_____ x_____bu. = $_____

(b) $_____ - $_____ x_____bu. = $ _____

Soybean Sales:

(a) $_____ - $_____ x_____bu. = $_____

(b) $_____ - $_____ x_____bu. = $ _____

Hog Sales:

(a) $_____ - $_____ x_____ cwt. = $_____

(b) $_____ - $_____ x_____ cwt. = $_____

Summary: Net Receipts

	Upper Third	Lower Third
Corn	(b) $ _____	(a) $ _____
Soybeans	(b) $ _____	(a) $ _____
Hogs	(b) $ _____	(a) $ _____
TOTAL	$ _____	$ _____

Part 2: Assume 50% of family income is derived from the net receipts of the above farm sales. What is the difference to family income based on marketing in the lower third and the upper third range of prices?

How would the difference affect family living?

Part 3: Based on figures from Parts 1 and 2, explain why market timing is important.

HOG PRICE WORKSHEET

Objective: To forecast the price of hogs when fundamental factors such as per capita pork, beef, and poultry supply, per capita disposable income, and population growth are considered.

Background: Price flexibilities show the relationship between changes in hog prices and changes in price or supply of competing meat products.

Directions: Calculate the hog price forecast based on the percentage changes indicated.

Situation:	Percentage change from last year		Price[a] Flexibility Value		
1. Per capita pork supply	0	x	_____	=	_____%
2. Per capita beef supply	- 2.0	x	_____	=	_____%
3. Per capita poultry supply	+ 4.0	x	_____	=	_____%
4. Per capita disposable income	+ 5.0	x	_____	=	_____%
5. Population	+ .90	x	_____	=	_____%
6. Net % effect on hog price					_____%

7. Hog price forecast

1988 Hog Price = $45.90

1989 Hog Price = _____ x _____ = _____

[a] Select the midpoint price flexibility values shown on page 10-8.

EFFECT OF CORN SUPPLY AND UTILIZATION ON PRICE*

Objective: To use the changes in corn supply and utilization as a means of predicting corn prices.

Directions: Compute the net supply change, predicted season average price, and predicted Iowa price of corn assuming the price will change 2% in the opposite direction for each 1% change in corn supply.

Average U.S. price in this year was $2.25. Assume the Iowa average price are $.10 below the U. S. price.

	This Year	Next Year	Change
Total Corn Supply (mil. bu.)	9,920	10,615	_____ %
Total Utilization (mil. bu.)	9,000	9,270	_____ %
% Change in Supply			_____
% Change in Price			_____
Predicted Price		_____	
Predicted Price in Iowa		_____	

If you had 12,000 bu. of corn to sell both years, what would be the difference in income from corn sales between the two years?

_____

Other Sources of Information:

1. USDA Economic Research Service Monthly Report.
2. Commodity Wire Service
3. Doanes and other commodity newsletters.
4. Iowa Farm Outlook Newsletter

* Refer to page 10-12 for the explanation of the relationship between domestic supply and corn prices.

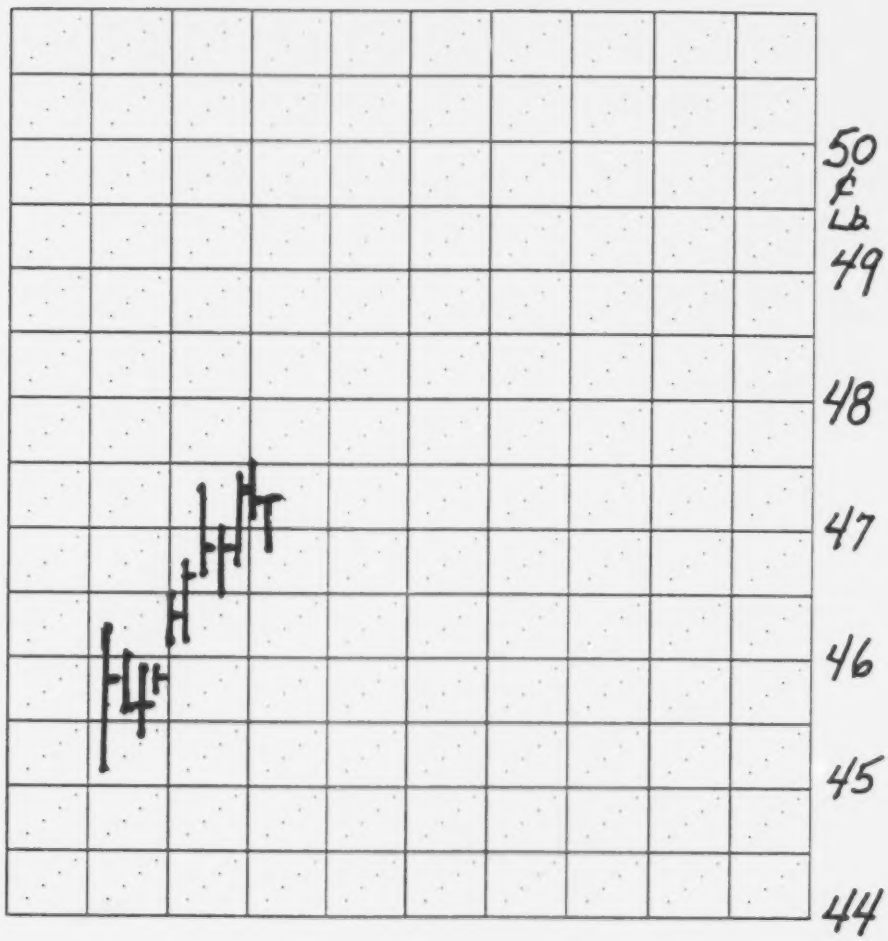
Charting Exercise

Objective: to be able to plot a bar chart when given the high, low, and closing price for each day. Also to be able to interpret such a chart.

Using the figures given below, complete the bar chart on the following page. Analyzes the chart by answering the questions below the chart.

	High	Low	Close
✔	46.30	45.10	45.80
✔	46.00	45.60	45.60
✔	45.90	45.40	45.60
✔	45.90	45.70	45.80
✔	46.50	46.10	46.30
✔	46.70	46.10	46.60
✔	47.30	46.60	46.80
✔	47.00	46.50	46.80
✔	47.40	46.70	47.30
✔	47.50	47.10	47.20
✔	47.20	46.80	47.20
❑	47.10	46.50	46.70
❑	47.40	46.80	47.40
❑	48.20	47.70	48.20
❑	48.70	48.10	48.30
❑	48.60	48.10	48.40
❑	48.70	48.20	48.30
❑	49.20	48.30	49.00
❑	49.30	48.70	49.00
❑	49.00	48.70	48.90
❑	49.20	48.60	49.00
❑	49.10	48.70	49.00
❑	49.30	48.70	49.30
❑	49.80	49.00	49.40
❑	49.50	49.30	49.50
❑	49.40	49.10	49.20
❑	49.20	48.70	48.90
❑	48.70	48.50	48.60
❑	49.00	48.50	48.70

Charting Exercise



What formation do you recognize in this chart?

What (if any) signals show up on the chart that give an indication of price change?

What would you expect the price to do in the days or weeks ahead?

How is this information useful to a producer?

FORECASTING USING FUNDAMENTAL AND TECHNICAL ANALYSIS

OBJECTIVE: To combine both fundamental and technical analysis in forecasting the price of hogs.

Situation: The date is March 31. You farrowed 600 pigs in January to be sold at 230 pounds in late July. You estimate your production cost at $44 per cwt.

USDA Outlook and Situation: February pork production totaled 1.2 billion pounds, up 2 percent from February the previous year. Hog slaughter at 6.79 million head increased 2 percent and the average live weight was 247 pounds, the same as February of last year.

Iowa Farm Outlook Newsletter: Estimated sow farrowings from December to February were down 2% from the previous year. Those hogs will come to market June-September this year. July price the previous year was $46.59.

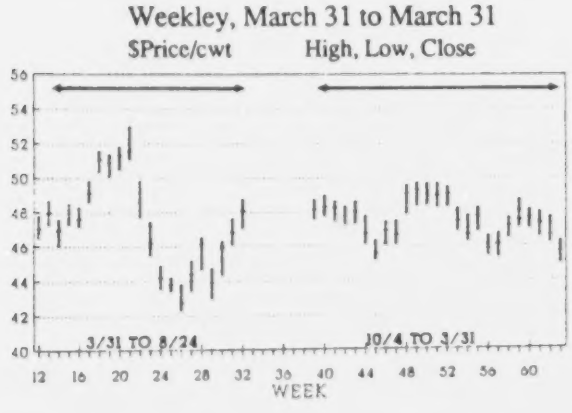
Today's market for 230 pound barrows and gilts:

Iowa-Southern Minnesota direct	$37.75
Sioux City, Iowa	38.25
Peoria, Illinois	38.25

Chicago Mercantile Exchange

August Live Hog Futures are trading at $45.60

CME Live Hog Futures (August Contract)



Forecast: Based on outlook, current cash price, and CME August futures, do you:

1. Expect the late July cash price to be higher or lower? _____
2. Expect to meet your production costs at the price you forecast? _____
3. Need to consider methods of marketing other than cash sale? _____

MARKETING TERMINOLOGY PUZZLE

Objective: To evaluate your familiarity with agricultural marketing terms.

Across

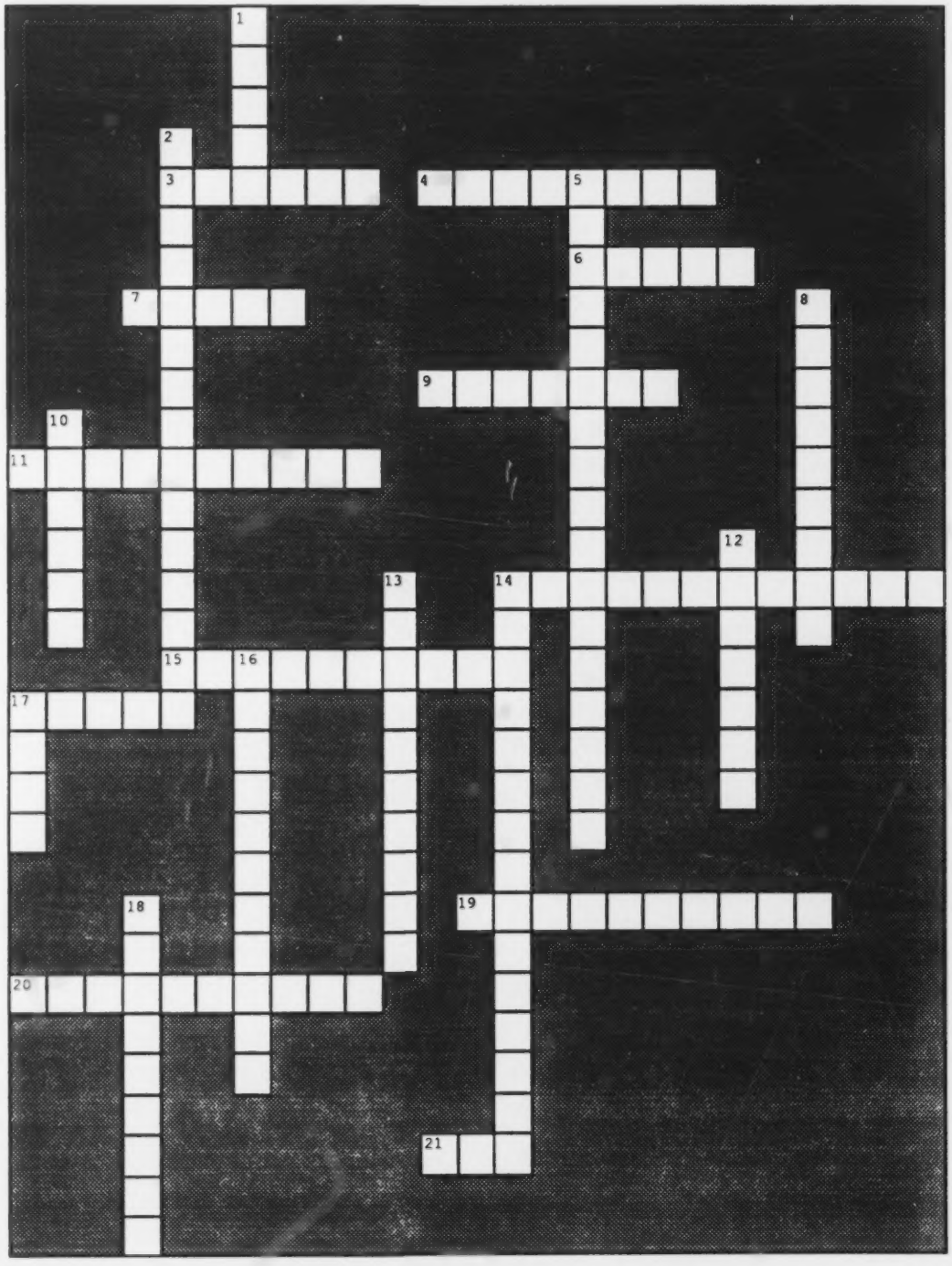
3. A right to buy or sell a particular futures contract during the life of the option at a specific price.
4. A part of technical analysis for forecasting price movements which analyzes past price behavior through the use of charts and graphs.
6. The amount the market will pay from one trading month to the next for future delivery .
7. The grade of a commodity.
9. The belief which looks toward lower market prices.
11. A contract giving the call option buyer the right, but not the obligaton, to buy a futures contract at a specific price premuim during a specific time period. The call option seller is obliged to sell futures to the call option buyer if the buyer exercises the option to buy.
14. Factors which affect the price of a commodity through supply and demand, such as weather and consumer demands.
15. The market in which actual commodities are bought and sold. Refers not only to elevator companies and other producers buying a product, but also to the organized cash grain sales of commodity exchanges, central stockyards, and over-the-counter cash trading.
17. A set daily price beyond which the market may not rise or fall in one trading day.
19. The measure of the amount by which the underlying futures is expected to fluctuate in a given period of time.
20. The price of cash contracts or futures for any given commodity or time. Quotations are available through newspapers, television, and computer screens.
21. The location on the trading floor where traders and brokers buy and sell futures contracts.

Down

1. Selling a futures contract or option (go short) when there is no offsetting position.
2. A cash market contract in which the seller agrees to deliver a specific quantity and quality of commodity to the buyer at a specified time and location for a previously agreed on price.
5. Price forecasting that looks at historical information and uses charts and graphs to predict market movement.
8. The least cost at which one can enter and then close out a position.
10. An amount of money deposited to guarantee the performance of a futures contract.
12. Buying or selling offsetting positions in order to provide protection against price change.
13. Call from a brokerage firm to the customer to bring margin deposits up to the required minimum.
14. A contract traded on a futures exchange to make or take delivery of standardized amount and quality of a commodity during a specific month which meets the exchange's terms at a price established in the trading pit.
16. The price at which the buyer of a put or call has the right to exercise the option.
17. A position which is established by purchase of a futures contract or a option if there is no offsetting position.
18. A contract that grants the buyer the right, but not the obligation, to sell (go short) to the option seller at a specific price during a specific time period.

MARKET TERMINOLOGY PUZZLE

OBJECTIVE: To evalute your familiarity with agricultural marketing terms.



MARKETING RECORDS

Commodity _____

Date of sale _____

	Price received	Difference from price received (line D)
A. Base price received	A. _____	
B. Grade premiums received	B. _____	
C. Discounts received	C. _____	
D. Net price received (A + B - C)	D. _____	
E. Quoted cash price at time of sale	E. _____	D - E = _____
F. Highest price within 2 weeks prior to sale	F. _____	D - F = _____
G. Highest price within 2 weeks after sale	G. _____	D - G = _____
H, I, J. Alternative pricing (forward contract, hedged with futures contract, cash sale, other)	H. _____	D - H = _____
	I. _____	D - I = _____
	J. _____	D - J = _____

10-44

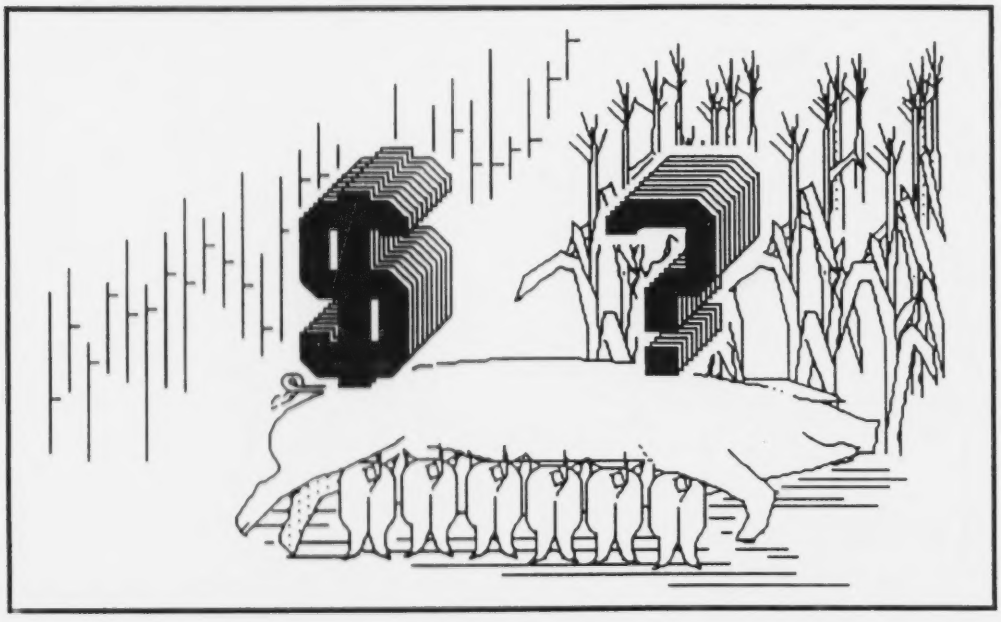
Take-Home EX 10-7

INTRODUCTION TO AGRICULTURAL MARKETING

OBJECTIVES:

Upon completion of this section of the marketing unit, each farm family will:

1. understand the importance of marketing to the farming operation,
2. understand fundamental and technical factors affecting agricultural commodity prices,
3. identify how seasonal patterns affect market returns,
4. be familiar with sources of information regarding factors which affect commodity prices, and
5. improve its ability to forecast price commodities based on market information.



Prepared by Gene Futrell, Extension Economist; Mary M. de Baca, Assistant Professor, Family Environment; Mark Zidon, Graduate Student, Agricultural Education; Craig Chase Extension Associate; William Edwards, Extension Economist; and Cynthia Needles Fletcher, Extension Specialist, Family Environment.

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PM-1284j | September 1989

INTEREST APPROACH

The object of the interest approach is to create an atmosphere where participants can freely discuss materials concerning marketing.

Use the Dallas McGinnis market tape to get participants talking about marketing and marketing terminology. Instructor's directions for this activity are found on page TG 10-5.

Alternate interest approach: Have participants complete the activity "Meeting your fellow marketers."

TEACHING OUTLINE

Materials Needed	Approximate Time (Min)	Teaching Guides	Reference Page
		Introduction to Marketing	
TM 10-1 to TM 10-5 EX 10-1	10	Establish the need to be concerned with marketing by citing people's comments about marketing and by analyzing the effects a volatile market can have on the timeliness of marketing. Have participants complete EX 10-1. TM 10-5 can be used to record and discuss results from EX 10-1.	10-3 10-3
TM 10-6 TM 10-7	5	Summarize the importance of marketing with historical yearly changes in markets. Note the difference in income good marketing could have had in some years.	
TM 10-8 to TM 10-11	5	Discuss the need for a marketing plan. Note that a plan includes production records as well as historical prices. In a realistic plan, peak price is seldom attained. A plan also includes realistic farm and family goals.	10-3 to 10-5
TM 12	3	Define technical and fundamental market analysis as a means of forecasting prices.	10-5
		Fundamental Hog Market Analysis	
TM 13 to TM 16	5-10	Discuss fundamental analysis of the hog market •the per capita supply of pork •the demand for pork •the price or supply of competing meat products •the farm retail spread or margin on pork	10-6 to 10-10
EX 10-2	10	Have participants complete EX 10-2 on forecasting hog prices.	10-8
TM 10-17 TM 10-18	5	Discuss the use of seasonal and cyclical patterns to forecast prices.	10-8 to 10-10

Materials Needed	Approximate Time (Min)	Teaching Guides	Reference Page
		Fundamental Corn and Soybean Market Analysis	
TM 10-19 to TM 10-21	10	Discuss fundamental analysis of corn market •domestic corn feeding •grain exports •domestic supply	10-11 to 10-13
EX 10-3	15	Forecast corn price from changes in supply and utilizations.	10-12
	10	Discuss fundamental analysis of soybean market •domestic meal demand •soybean protein exports •soybean oil use •soybean oil exports	10-13 to 10-15
		Technical Market Analysis	
TM 10-22 to TM 10-24	5	Define technical market analysis.	10-15 to 10-16
TM 10-25 to TM 10-28	5-10	Identify market movements useful in forecasting price movements.	10-16 to 10-20
EX 10-4	10-15	Have participants chart prices and make a prediction about prices on EX 10-4.	10-16 to 10-20
EX 10-5	10	Have participants use both technical and fundamental analysis of markets to forecast prices.	10-11 to 10-20
		Sources of Market Information	
TM 10-29	5	Emphasize that forecasting depends on keeping informed about the market.	
		Conclusion	
TM 10-30	5	Summarize major points of session.	
	5	Have participants listen to part of the Dallas McGinnis tape again. Now that they know some things to look for, can they remember more?	

OPTIONAL ACTIVITIES

A. Invite a broker or economist in to provide further insight into the need to be aware of fundamental and technical analysis of the markets.

B. Play a money board game such as monopoly to point out the effects of supply and demand on the price of commodities. This same idea can be accomplished by auctioning a single item in demand (such as a beverage just before coffee break). The participants may be willing to pay a high price. However, when they discover that the supply is plentiful (when you bring out a tray of beverages) the price will quickly drop.

C. Plan a field trip to the Chicago Mercantile or comparable trading center.

D. Use the crossword puzzle EX 10-6 as an activity during break, as a take-home activity, as an interest approach, or introduction to the next marketing unit.

ON-FARM ACTIVITY

Take inventory of the commodities the farm family has to sell. How much livestock? How much stored grain? How much growing crops? What commodities can they hold and deliver for cash sales at their own choosing (e.g. stored corn)? What commodities must they sell as a cash commodity by a particular time (e.g. market hogs)?

Review any past records of sales prices, premiums, and price comparisons that the farm family is willing to share. Look over appropriate records kept on EX 10-7.

EVALUATION

Give the test provided at the beginning of the second marketing lesson. Use this to determine how well the marketing information is being received and remembered. It can also be used to help participants get back into the topic of marketing at the next session.

Interest Approach--Dallas McGinnis Market Report

Objective: to become familiar with marketing terms and information.

Preview the tape prior to the lesson to familiarize yourself with the Dallas McGinnis Market Report.

Read the following story to the participants as class begins.

> The procedure is actually quite simple. First you arrange things into different groups. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. A mistake can be expensive as well. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then one can never tell. After the procedure is completed one arranges the materials into different groups again. Then they can be put in their appropriate places. Eventually they will be used one more time and the whole cycle will have to be repeated. However, that is a part of life.*
>
> *From Bransford, J. D. and Johnson, M. K. Conceptual prerequisites for understanding: Some investigations of comprehension and recall. Journal of Verbal Learning and Verbal Behavior. 1972, 11, 717-726.

After completing the story, ask the participants to write down five things they remember about the story. Now explain the situation as being an exercise in doing laundry. Reread the story. Can they remember more when they know the situation? The same can be said of listening to the markets. When you know what to listen for, you will comprehend more of the report.

Next, play the tape at the beginning of class with the instructions to simply listen carefully to the markets. There is no need to advise participants of content to increase their focus. The idea is to determine what they can pick up from the markets.

After listening to the tape, have the participants write down five of the most important facts they remember from the tape, create a list of these items. This list can be used later to discuss fundamental and technical analysis of the markets.

Dallas McGinnis Tape - Meeting Summary

At the conclusion of the session, the participants should be more aware of marketing information. After listening again to the tape, can they address the following questions?

Which commodities were included in the market report?

What is the cash price for corn in your area?

What was the closing futures price for the nearby contracts of soybeans?

What was the direction of corn prices?

What was the direction of soybean prices?

What fundamental information was given that could have an effect on grain prices?

How might this information be useful to a producer?

These questions or others can be useful in emphasizing the need to be aware of market information.

Meet your fellow marketers

Can you find a person that fits each of the following categories and convince them to sign the appropriate line?

Try to find someone who...

_____ Has been to the Chicago Board of Trade.

_____ Owns a futures contract.

_____ Has stored cash grain.

_____ Sold corn for more than _____ during the last year.

_____ Sells some grain every month.

_____ Consumes some of their grain or livestock commodities at home.

_____ Sells market hogs.

_____ Has speculated with livestock futures.

_____ Listens to the markets every day.

_____ Charts prices for a commodity.

_____ Subscribes to DATA-LINE.

_____ Gets the Wall Street Journal.

_____ Has sold some grain or livestock within the last week.

_____ Knows what the soybean crop is like in a foreign country.

_____ Receives their total income from the sale of farm commodities.

_____ Has used option contracts.

Example announcement letter.

Dear John and Jane Doe:

Agricultural marketing is an essential skill to every farm family. It is an area where many farmers struggle. If a family can successfully use marketing strategies to receive an acceptable price for commodities, then it may be more realistic to fulfill family goals.

Our next session of the Farm and Family Management program will focus on the topic of marketing. We will address the use of fundamental and technical information to help forecast prices. Unit Ten of your study notebook covers this information. It would be very helpful if you could read this information before our marketing session. Please pay particular attention to the description of fundamental and technical marketing factors.

The session on marketing will be on _____ (date) at _____ (time). It will be held at _____ (place). We look forward to your participation in this session.

Sincerely,

Your FFM Facilitator

MARCH 89 SOYBEANS

Each Horizontal line = 10 cents

Can you identify a chart formation here?

This is an uptrending channel. The channel is drawn by locating the lowest two points (point A and B) on the uptrending bars. The top of the channel is drawn by making a line parallel to the bottom. This top line is placed on the highest bar on the upside of the channel (point C.)

What does this tell you about expected prices?

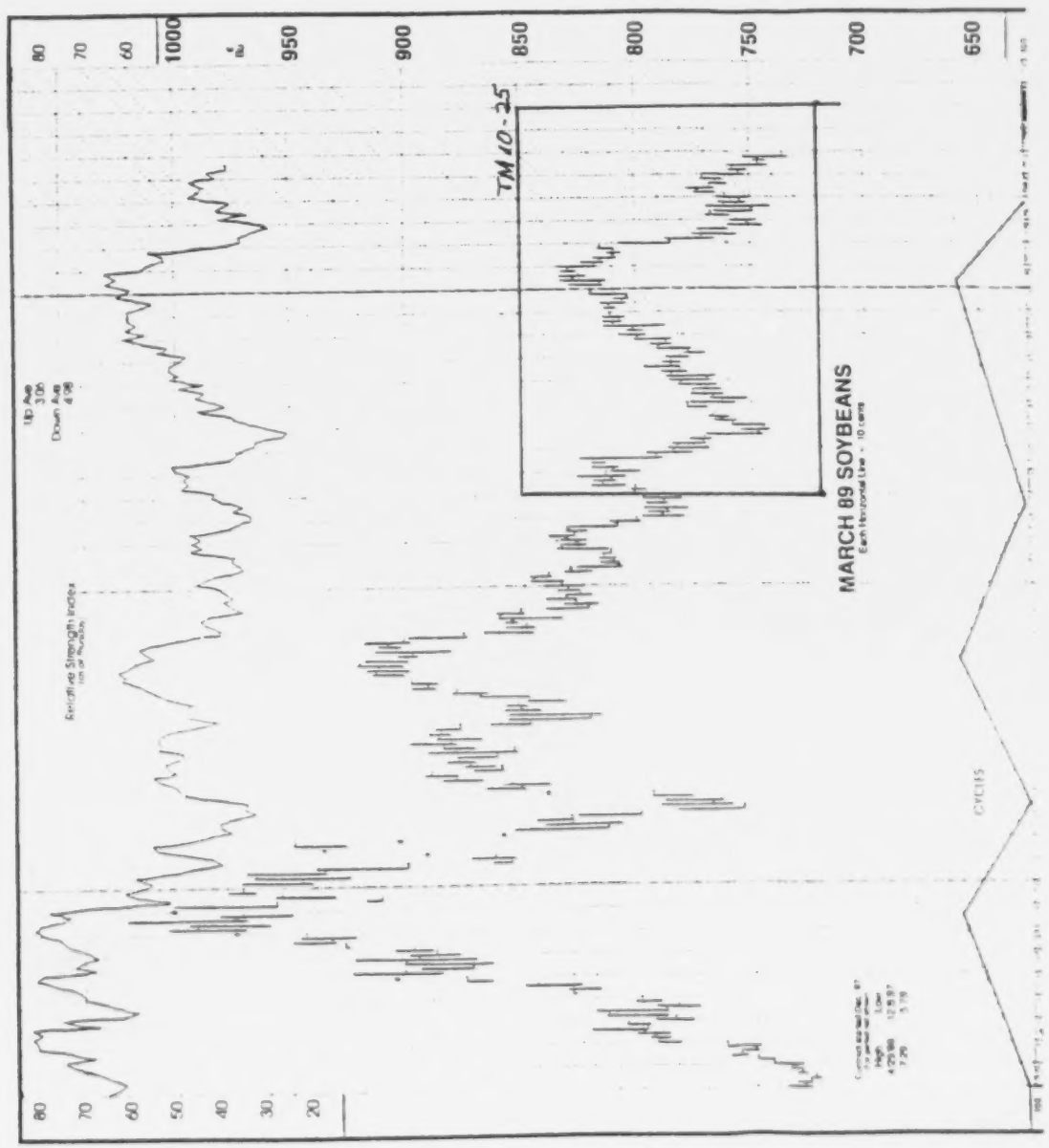
When the market closes below the channel (point D), this signals a decline in prices. A second close below the channel confirms the signal.

What does this mean to you as a producer?

A forecasted decline in price is a clue to price the commodity for sale, as the high price of the trend may have been reached. Pay attention to fundamental factors and your marketing plan.

Chart for March 89 Soybeans

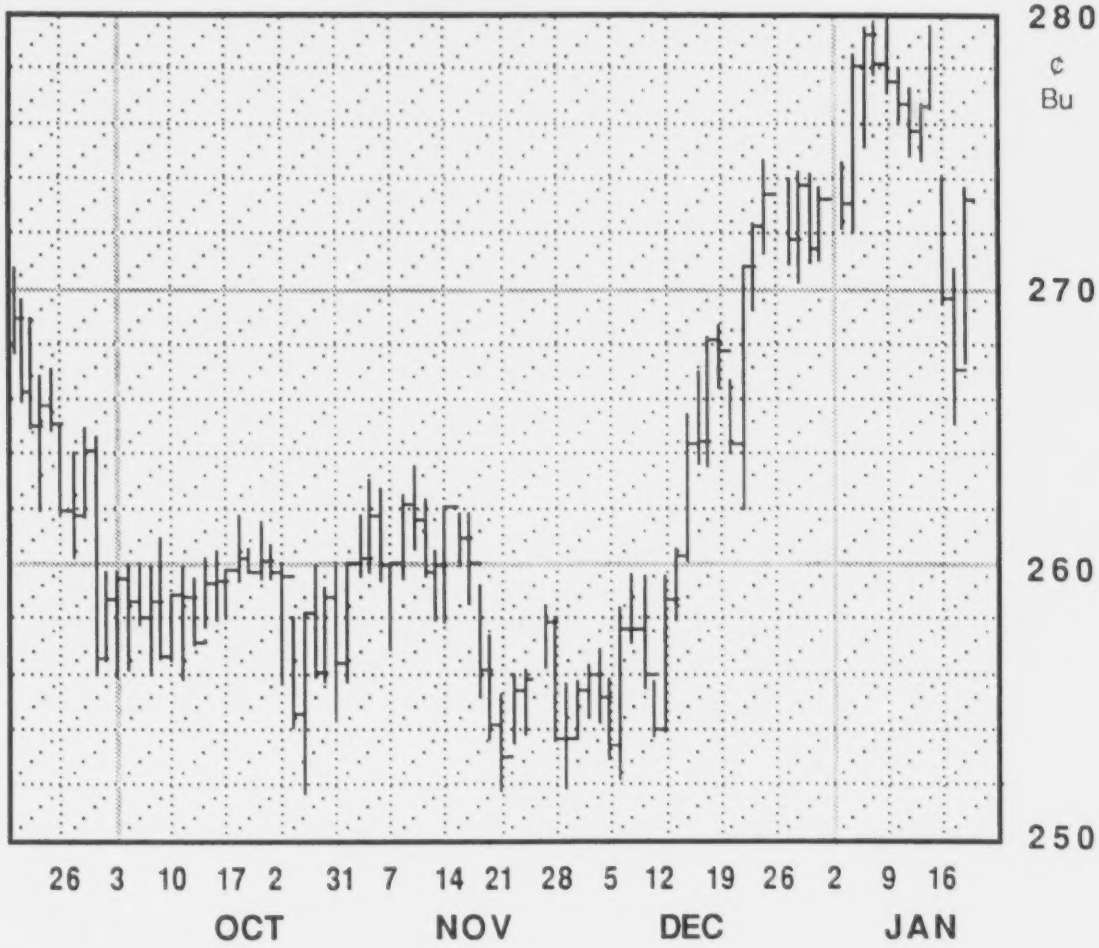
This chart illustrates the section of the larger chart used for TM 10-25. It may provide the participants with a larger picture of how the channel shown in TM10-25 fits in with the markets over a longer period of time.



Source: *Commodity Price Charts*, a weekly subscription publication by Oster Communications, Inc., 219 Parkade, Cedar Falls, IA 50613 (1-800-635-3981). Sample reproduced from Volume 13, No. 6, February 10, 1989.

DEC. 89 CORN

Each Horizontal line = 2 cents



Can you identify a chart formation here?

Double bottom (bottoms 3-4 times)

What does this tell you about expected prices?

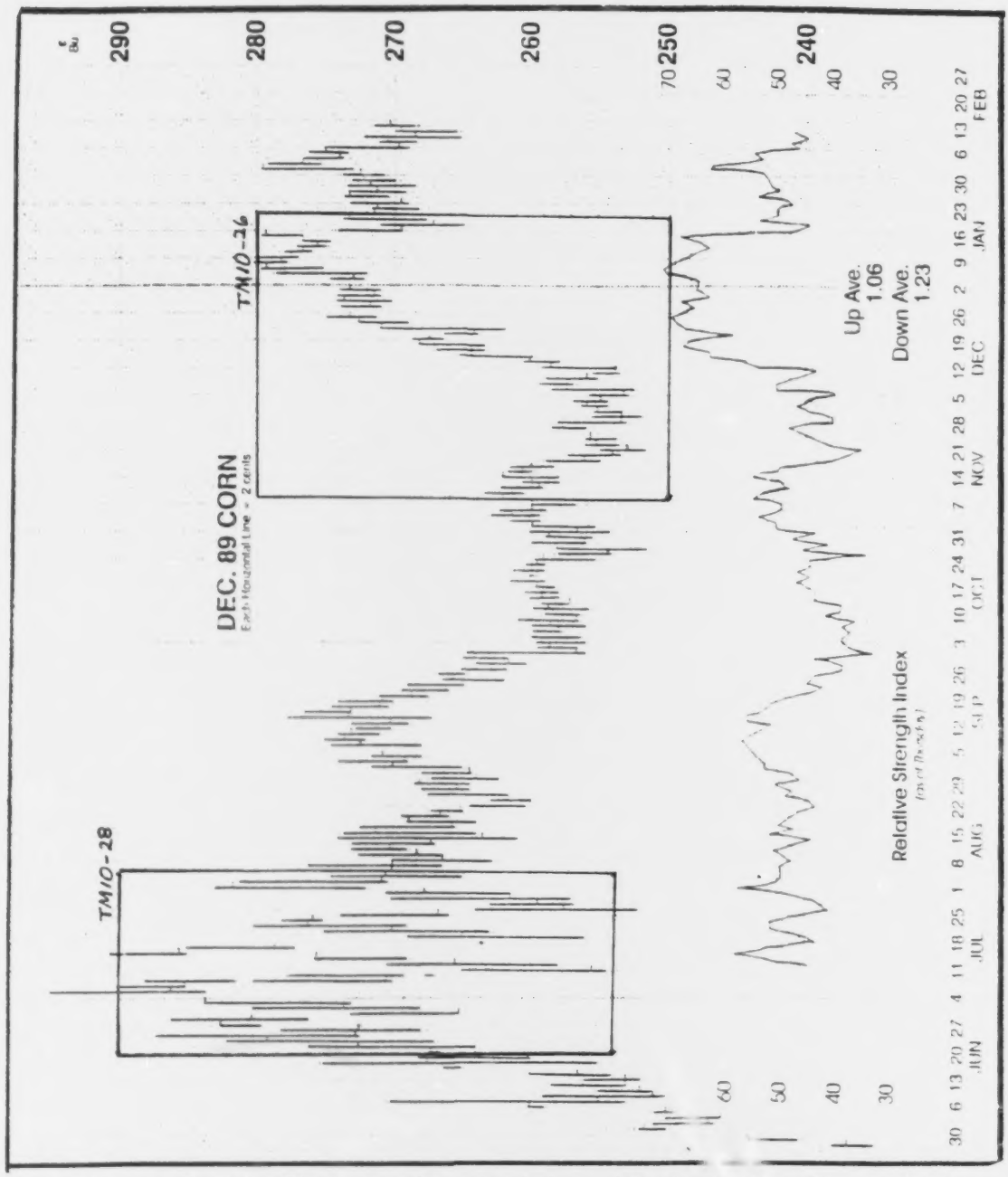
We can expect prices to increase.

What does this mean to you as a producer?

The low end of the market has been reached. This is a good time to wait before pricing commodities for sale. Pay attention to fundamental market factors.

Chart for December 89 Corn

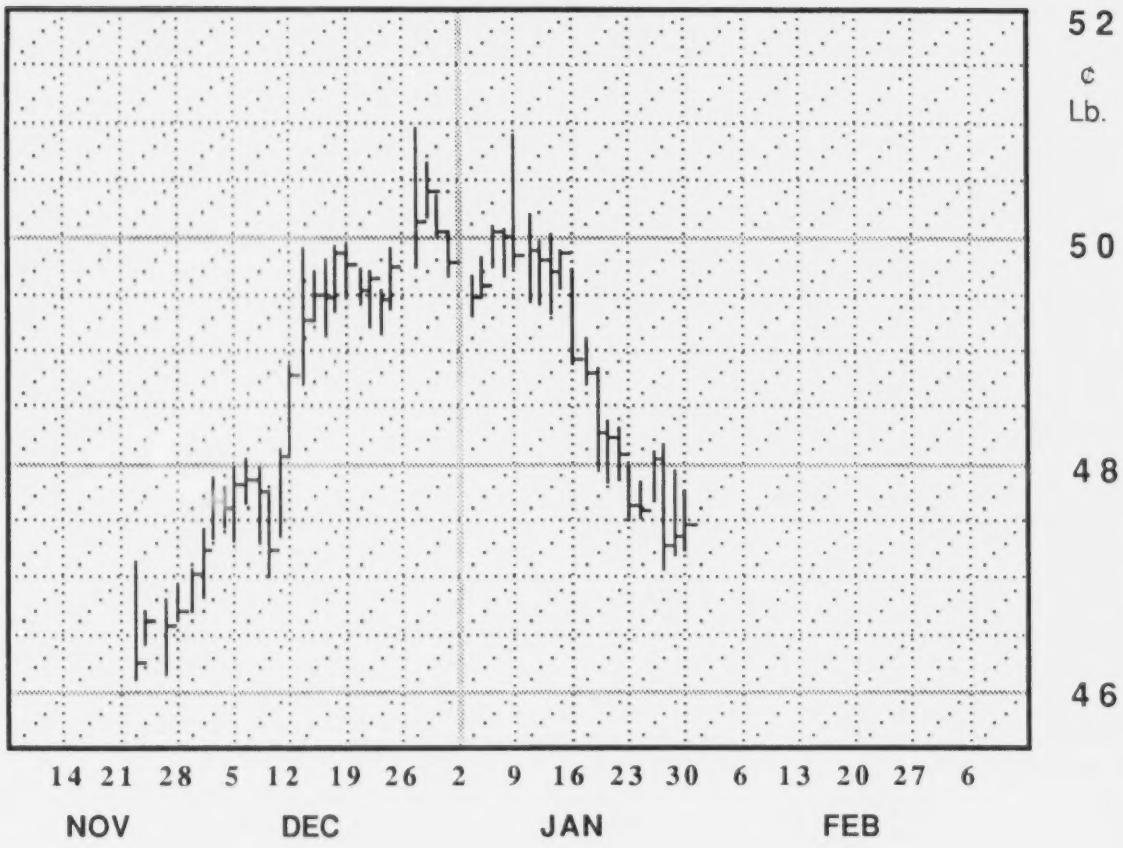
This chart illustrates the section of the larger chart used for TM 10-26 and TM 10-28. It may provide the participants with a larger picture of how these charts fit in with the markets over a longer period of time.



Source: *Commodity Price Charts*, a weekly subscription publication by Oster Communications, Inc., 219 Parkade, Cedar Falls, IA 50613 (1-800-635-3981). Sample reproduced from Volume 13, No. 6, February 10, 1989.

JULY 89 HOGS

Each Horizontal line = 50 points



Can you identify a chart formation here?

Head and shoulders. There is also an uptrending channel.

What does this tell you about expected prices?

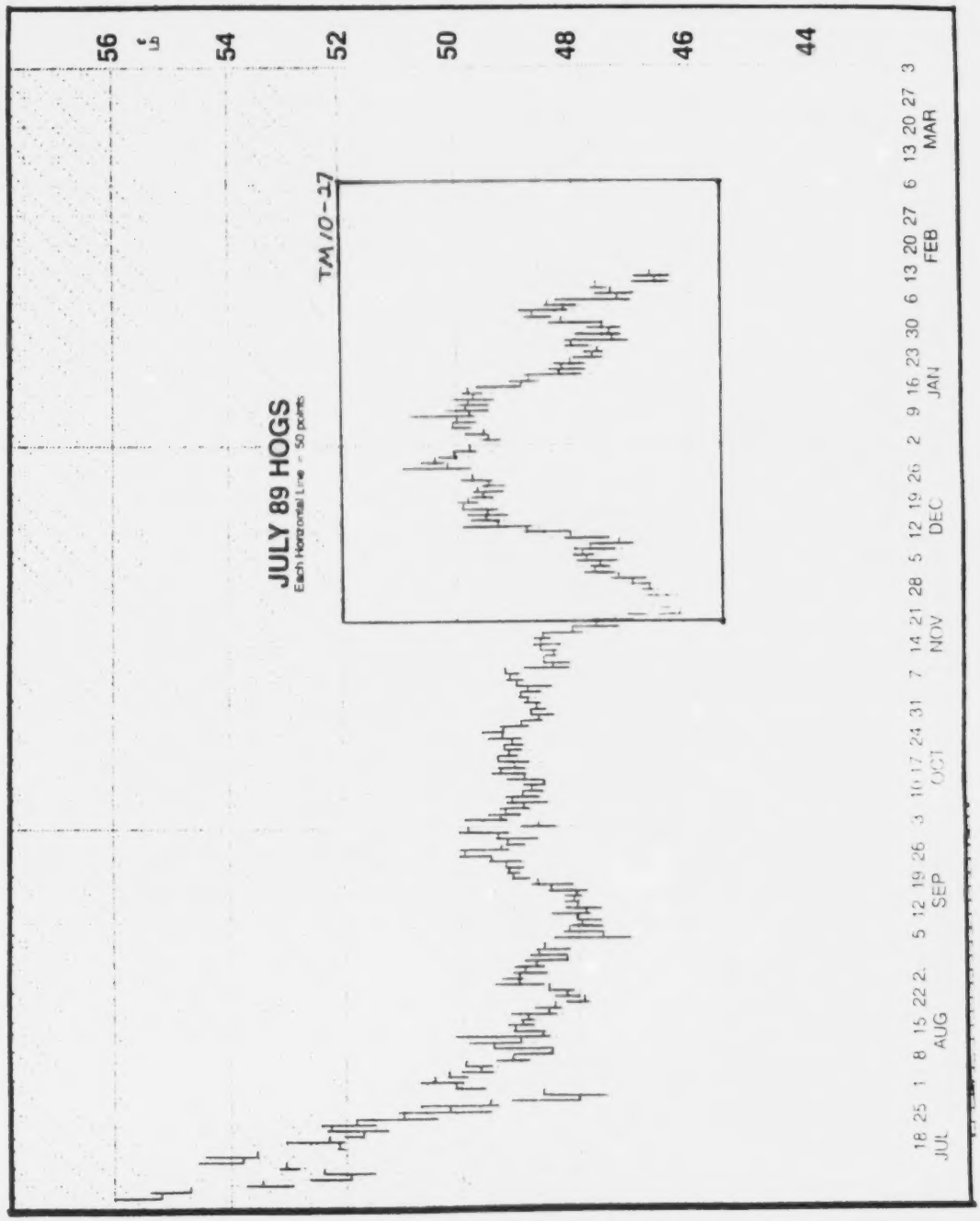
This signals a decline in prices.

What does this mean to you as a producer?

The market is at a high point. This would be a good time to price your commodity if you are selling. Do not overlook fundamental factors. A large purchase of the commodity by a foriegn country could send prices back up.

Chart for July 89 Hogs

This chart illustrates the section of the larger chart used for TM 10-27. It may provide the participants with a larger picture of how the chart on TM 10-27 fits in with the markets over a longer period of time.



Source: *Commodity Price Charts*, a weekly subscription publication by Oster Communications, Inc., 219 Parkade, Cedar Falls, IA 50613 (1-800-635-3981). Sample reproduced from Volum 13, No. 6, February 10, 1989.

Price	- Costs	x Quantity	= Net

Corn Sales: 1.19+1.41/2 = 1.30 | 26,000-14,000

(a) $ 1.30+1.15=2.45 - $ 2.35 x 12,000 bu. = $ 1,200

1.64+1.86/2 = 1.75

(b) $ 1.75+1.15=2.90 $ 2.35 x 12,000 bu. = $ 6,600

Soybean Sales:

4.56+5.06/2 = 4.80

(a) $ 4.80 - $ 5.25 x 8000 bu. = $ -3,600

55.00+62.50/2 = 58.75

(b) $ 58.75 - $ 5.25 x 8000 bu. = $ 3,440

Hog Sales: 40.00+47.50/2 = 43.75 | 1000 x 235 ÷ 100

(a) $ 43.75 - $ 38.00 x 2,350 cwt. = $ 13,512.50

55.00+62.50/2 = 58.75

(b) $ 58.75 - $ 38.00 x 2,350 cwt. = $ 48,762.50

Summary: Net Receipts

	Upper Third	Lower Third
Corn	(b) $ 6,600	(a) $ 1,200
Soybeans	(b) $ 3,440	(a) $ -3,600
Hogs	(b) $ 48,762.50	(a) $ 13,512.50
TOTAL	$ 58,802.50	$ 11,112.50

Part 2: Assume 50% of family income is derived from the net receipts of the above farm sales. What is the difference to family income based on marketing in the lower third and the upper third range of prices?

47,690 x .50 = $23,845

How would the difference affect family living?

Quite a difference in being able to meet family needs and wants.

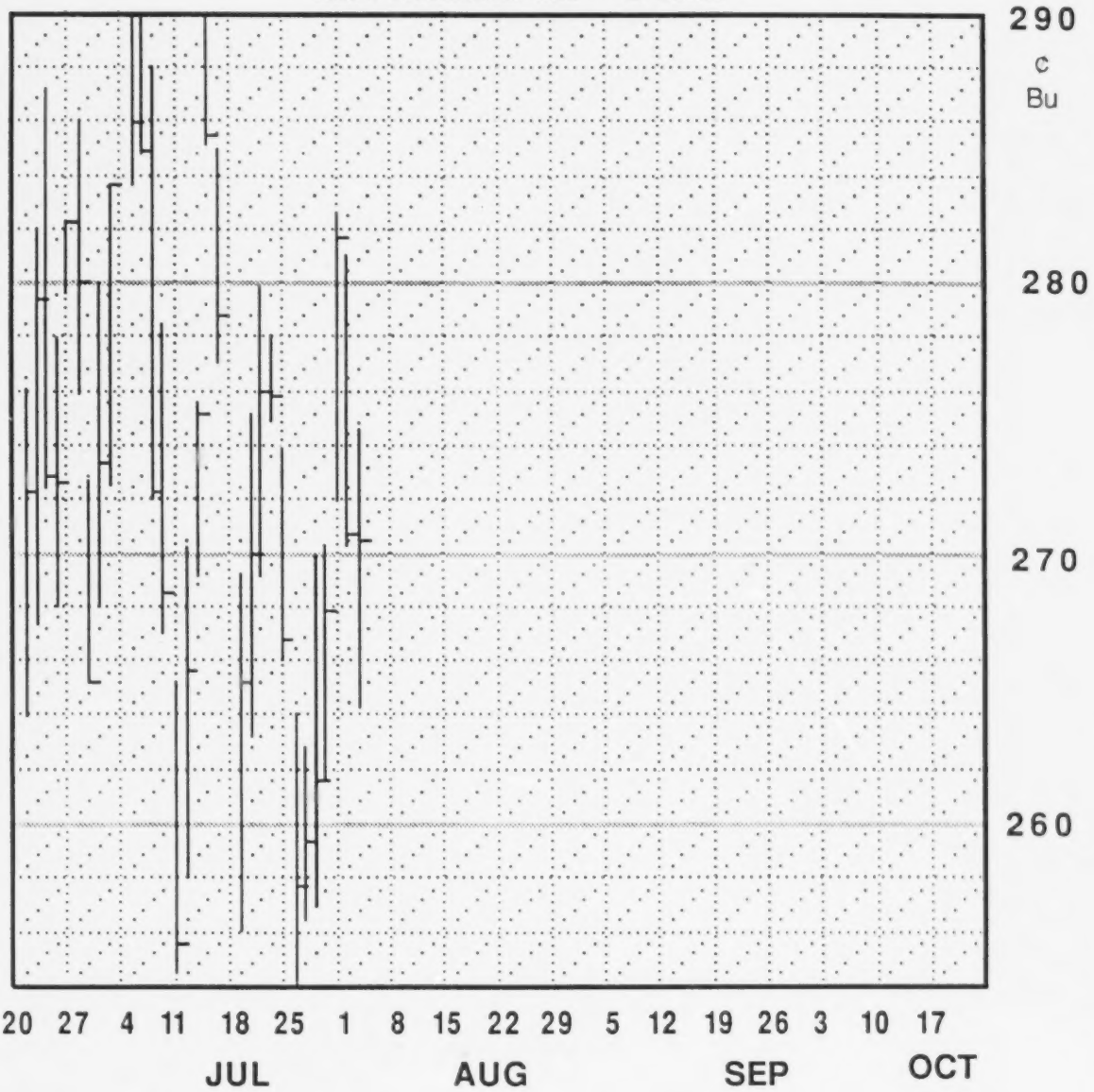
Part 3: Based on figures from Parts 1 and 2, explain why market timing is important.

Given the same costs of production and quantity to sell, the profit potential is greatly influenced by market timing.

BEST COPY AVAILABLE

DEC. 89 CORN

Each Horizontal line = 2 cents



What explanation can be given for this chart formation?

The drought in 1988 resulted in unstable markets. Localized rainfall sent prices down. However, the news that the rain was insufficient sent prices back up.

What does this mean to you as a producer?

While technical market information is useful to aid in forecasting price changes, fundamental factors ultimately affect the price.

HOG PRICE WORKSHEET

Objective: To forecast the price of hogs when fundamental factors such as per capita pork, beef, and poultry supply, per capita disposable income, and population growth are considered.

Background: Price flexibilities show the relationship between changes in hog prices and changes in price or supply of competing meat products.

Directions: Calculate the hog price forecast based on the percentage changes indicated.

Situation:	Percentage change from last year		Price[a] Flexibility Value		
1. Per capita pork supply	0	x	-2.0	=	0.00 %
2. Per capita beef supply	-2.0	x	-.30	=	+.60 %
3. Per capita poultry supply	-4.0	x	-.40	=	-1.60 %
4. Per capita disposable income	+5.0	x	+.20	=	+1.00 %
5. Population	+.90	x	+1.00	=	+.90 %
6. Net % effect on hog price					.90 %

7. Hog price forecast

1988 Hog Price = $45.90

1989 Hog Price = 45.90 x 1.009 = $46.31

[a] Select the midpoint price flexibility values shown on page 10-8.

EFFECT OF CORN SUPPLY AND UTILIZATION ON PRICE*

Objective: To use the changes in corn supply and utilization as a means of predicting corn prices.

Directions: Compute the net supply change, predicted season average price, and predicted Iowa price of corn assuming the price will change 2% in the opposite direction for each 1% change in corn supply.

Average U.S. price in this year was $2.25. Assume the Iowa average price are $.10 below the U. S. price.

	This Year	Next Year	Change
Total Corn Supply (mil. bu.)	9,920	10,615	7%
Total Utilization (mil. bu.)	9,000	9,270	3%
% Change in Supply			+ 4%
% Change in Price + 4 x −2 =			−8%
Predicted U. S. Price 2.25 x (−.08)		2.07	
Predicted Price in Iowa 2.07 − .10		1.97	

$\frac{695}{9920} = 7\%$

If you had 12,000 bu. of corn to sell both years, what would be the difference in income from corn sales between the two years? $2,160

2.25 − .10 = 2.15 this year
2.07 − .10 = 1.97 next year
.18 x 12,000 bu = 2,160

Other Sources of Information:

1. USDA Economic Research Service Monthly Report
2. Commodity Wire Service
3. Doanes and other commodity newsletters
4. Iowa Farm Outlook Newsletter

* Refer to page 10-12 for the explanation of the relationship between domestic supply and corn prices.

Charting Exercise

What formation do you recognize in this chart?
An uptrending channel

What (if any) signals show up on the chart that give an indication of price change?
The price has closed twice below the bottom channel line.

What would you expect the price to do in the days or weeks ahead?
The price could be expected to decline.

How is this information useful to a producer?
This signal for declining prices means that a peak may have been reached. This would be a good time to price your commodity for sale.

FORECASTING USING FUNDAMENTAL AND TECHNICAL ANALYSIS

OBJECTIVE: To combine both fundamental and technical analysis in forecasting the price of hogs.

Situation: The date is March 31. You farrowed 600 pigs in January to be sold at 230 pounds in late July. You estimate your production cost at $44 per cwt.

USDA Outlook and Situation: February pork production totaled 1.2 billion pounds, up 2 percent from February the previous year. Hog slaughter at 6.79 million head increased 2 percent and the average live weight was 247 pounds, the same as February of last year.

Iowa Farm Outlook Newsletter: Estimated sow farrowings from December to February were down 2% from the previous year. Those hogs will come to market June-September this year. July price the previous year was $46.59.

Today's market for 230 pound barrows and gilts:

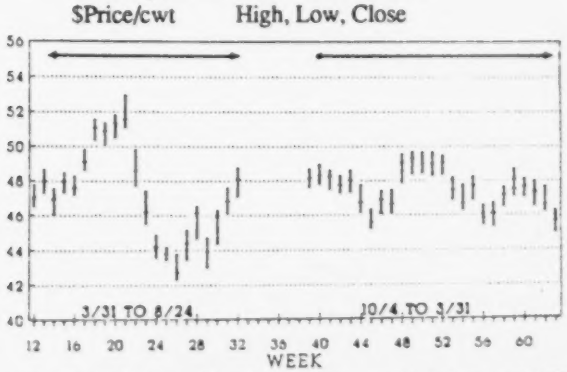
Iowa-Southern Minnesota direct	$37.75
Sioux City, Iowa	38.25
Peoria, Illinois	38.25

Chicago Mercantile Exchange

August Live Hog Futures are trading at $45.60

CME Live Hog Futures (August Contract)

Weekly, March 31 to March 31



Note: weeks 12-32 show last year's August futures contracts; weeks 40-63 show present August futures contracts.

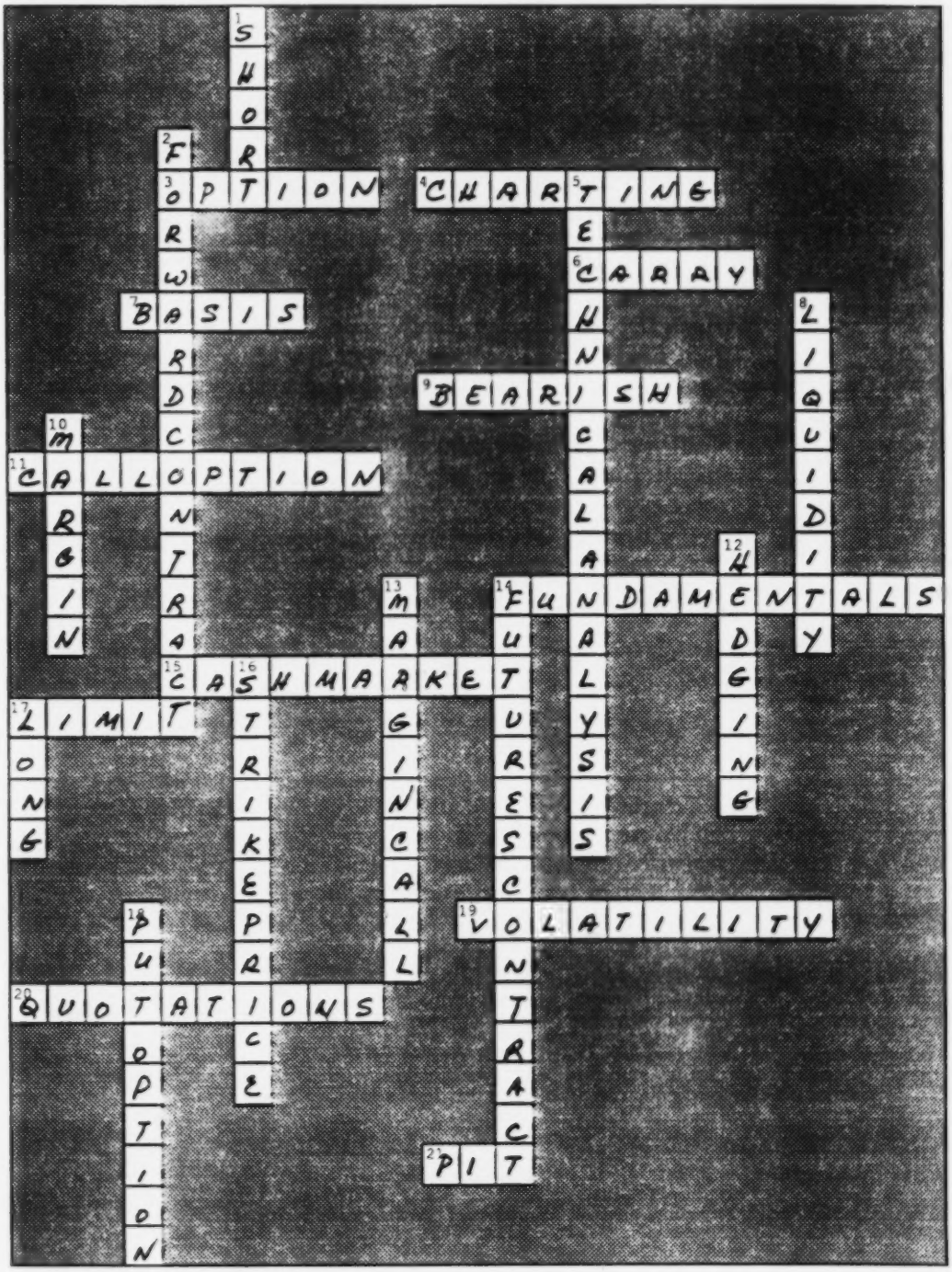
Forecast: Based on outlook, current cash price, and CME August futures, do you:

1. Expect the late July cash price to be higher or lower? higher
   a) with 2% less hogs coming to market in July, expect cash prices higher than last year's $46.59
   b) TM 10-17 shows highest average prices in August.
2. Expect to meet your production costs at the price you forecast? yes
   Prices would exceed $44 costs considering average negative $1 July basis in Iowa (see publication M-1243)
3. Need to consider methods of marketing other than cash sale? best to consider several alternatives
   Perhaps to lock in prices

(Figures based on March 31, 1988 to March 31, 1989 data)

MARKET TERMINOLOGY PUZZLE

OBJECTIVE: To evalute your familiarity with agricultural marketing terms.



Marketing Quiz
Fundamental and Technical Analysis

Identify each of the following statements as providing either fundamental or technical market information by placing a T or F on the line preceding the statement.

_____ 1. A fast-food chain plans to use biodegradable containers made from corn to serve their hamburgers.
_____ 2. Early reports are that acres planted to soybeans are up from last year.
_____ 3. Soybean futures opened up the limit today.
_____ 4. An increase in pork consumption is expected following the report that trimmed pork was found to have less cholesterol than chicken.
_____ 5. Corn prices hit a low today for the third time in two weeks.
_____ 6. The United States and Soviet Union are nearing an agreement to sell U.S. wheat to the U.S.S.R.
_____ 7. Nearby hog futures closed up 50 cents.
_____ 8. Recent rains in the Brazil are expected to help produce a bumper crop of soybeans in that country.
_____ 9. Hog farrowings are reported to be down from last year.
_____ 10. The price gap seen last week was closed today as the price of corn futures dropped today.

Which of the following can affect hog marketing? Place an "X" before those that do.

_____ 1. The price of corn.
_____ 2. Speculator's interest in hog futures contracts.
_____ 3. A new meat product being produced made from pork.
_____ 4. An increase in poultry production.
_____ 5. Increased litter sizes due to the introduction of Chinese hog genes.
_____ 6. Reduced number of pigs farrowed in winter months.
_____ 7. The hog/corn price ratio.
_____ 8. A chart formation of the hog futures market.
_____ 9. An increased interest in hog production due to favorable prices.
_____ 10. The price of tea in China.

Marketing Quiz
Fundamental and Technical Analysis

Identify each of the following statements as providing either fundamental or technical market information by placing a T or F on the line preceding the statement.

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F 2. Early reports are that acres planted to soybeans are up from last year.
T 3. Soybean futures opened up the limit today.
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F 6. The United States and Soviet Union are nearing an agreement to sell U.S. wheat to the U.S.S.R.
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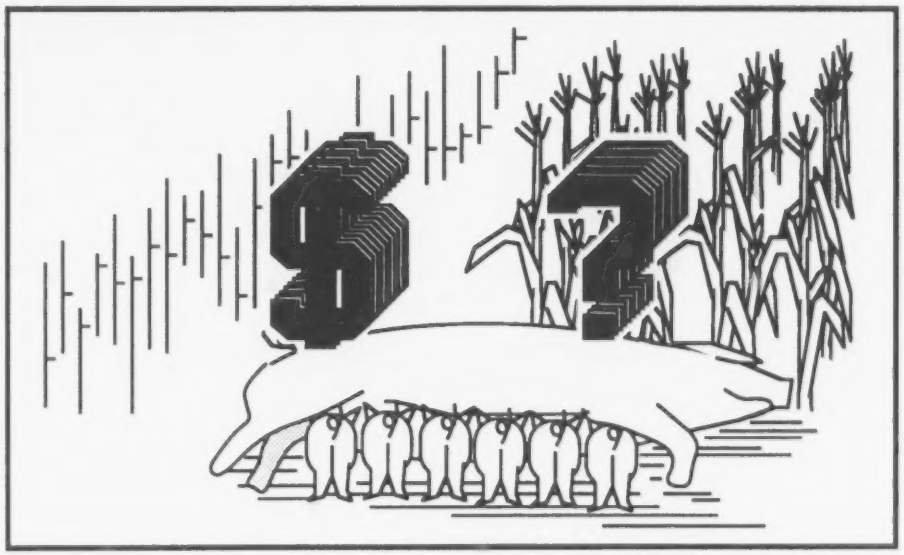
X 7. The hog/corn price ratio.
X 8. A chart formation of the hog futures market.
X 9. An increased interest in hog production due to favorable prices.
? 10. The price of tea in China.

This test can be used as an evaluation as well as a source for discussion. Reviewing the test after administering it could be a basis for a lively discussion.

The test could be used at the beginning of this session as a pretest or interest approach. It could also be used at the end as an evaluation or at the beginning of the next session.

FARM AND FAMILY MANAGEMENT



INTRODUCTION TO MARKETING

Are you confused about MARKETING?

I just don't know what to do. It's hard for me to make a marketing decision.

I'm just awful at marketing. The fellows at the coffee shop say they sold soybeans at $8 a bushel and I only received $6.50 for mine.

I tried a marketing plan once and it was like trying to shoot a buzzing fly at 100 yards.

I'm too busy to keep up with the markets.

It's not worth my time to figure out all that marketing stuff.

Marketing is just a big gamble, and I'm not a gambler.

Introduction to Marketing

1. **Why marketing is important**
2. **Developing a marketing plan**
3. **Developing future price expectations (forecasts)**
4. **Market information sources**

Marketing

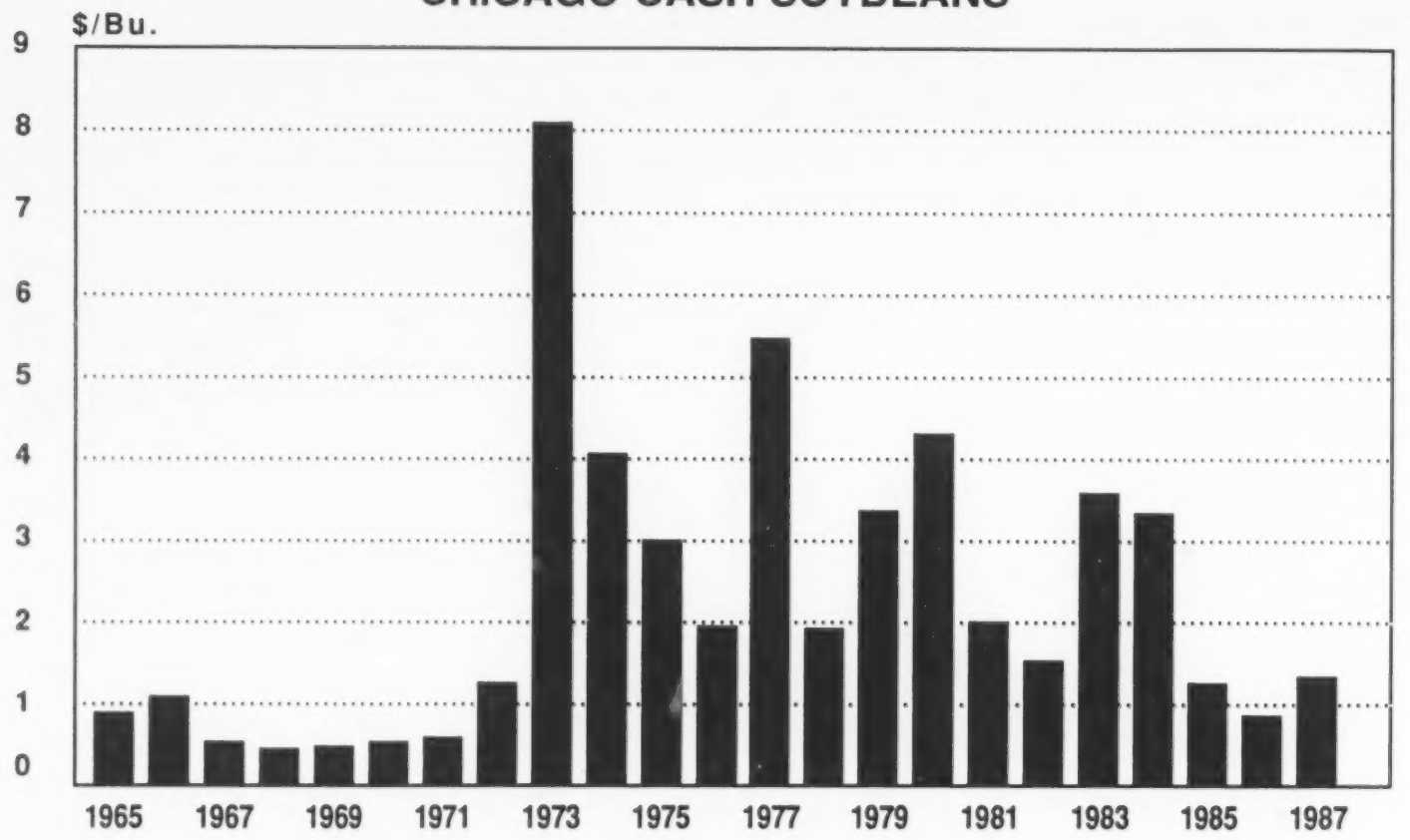
The process of making decisions about selling or pricing farm products for current or future delivery.

Why is Marketing Important?

Commodity	Low price	High price	Differ-ence	Amount (bu, lbs)	Total Difference
Corn					
Soybeans					
Hogs					
				Total	

If there were very little change in prices, marketing would not be of much consideration.

CHICAGO CASH SOYBEANS

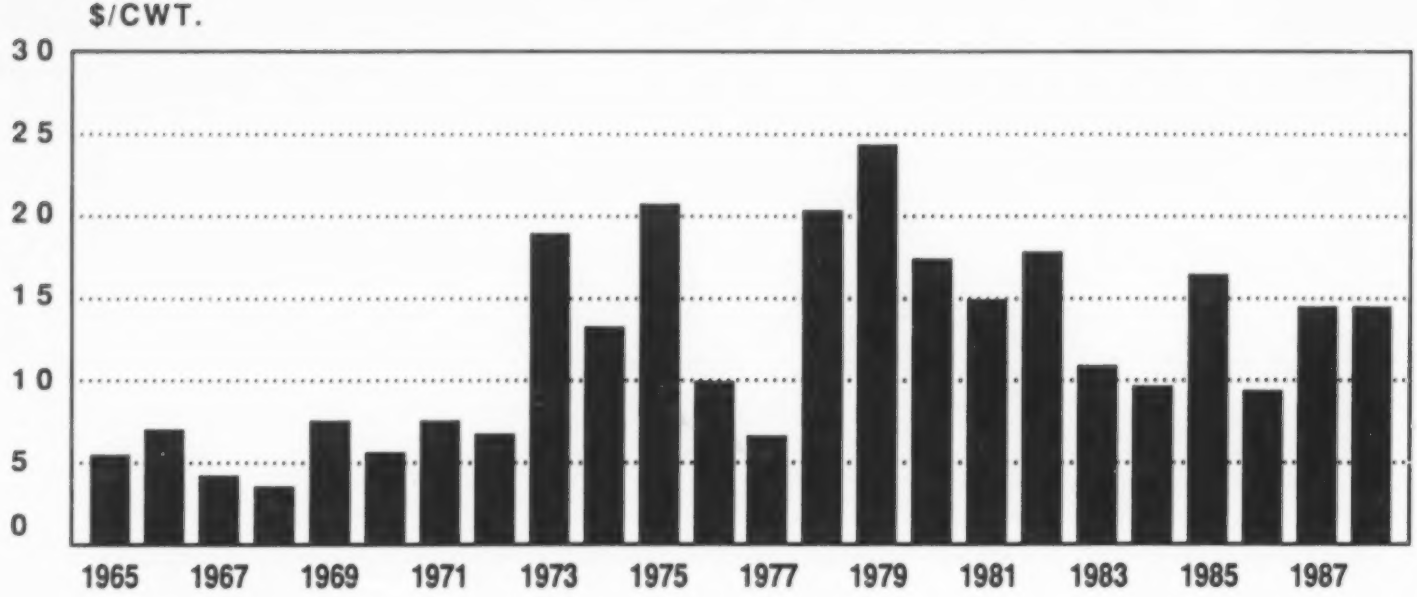


Bars indicate spread between high and low for that year.

In 1983, for example, 5000 bu. of soybeans could have been sold for $18,100 more if they had been sold at the highest price rather than the lowest (5000 x 3.62 = 18,100).

CHOICE STEERS, OMAHA

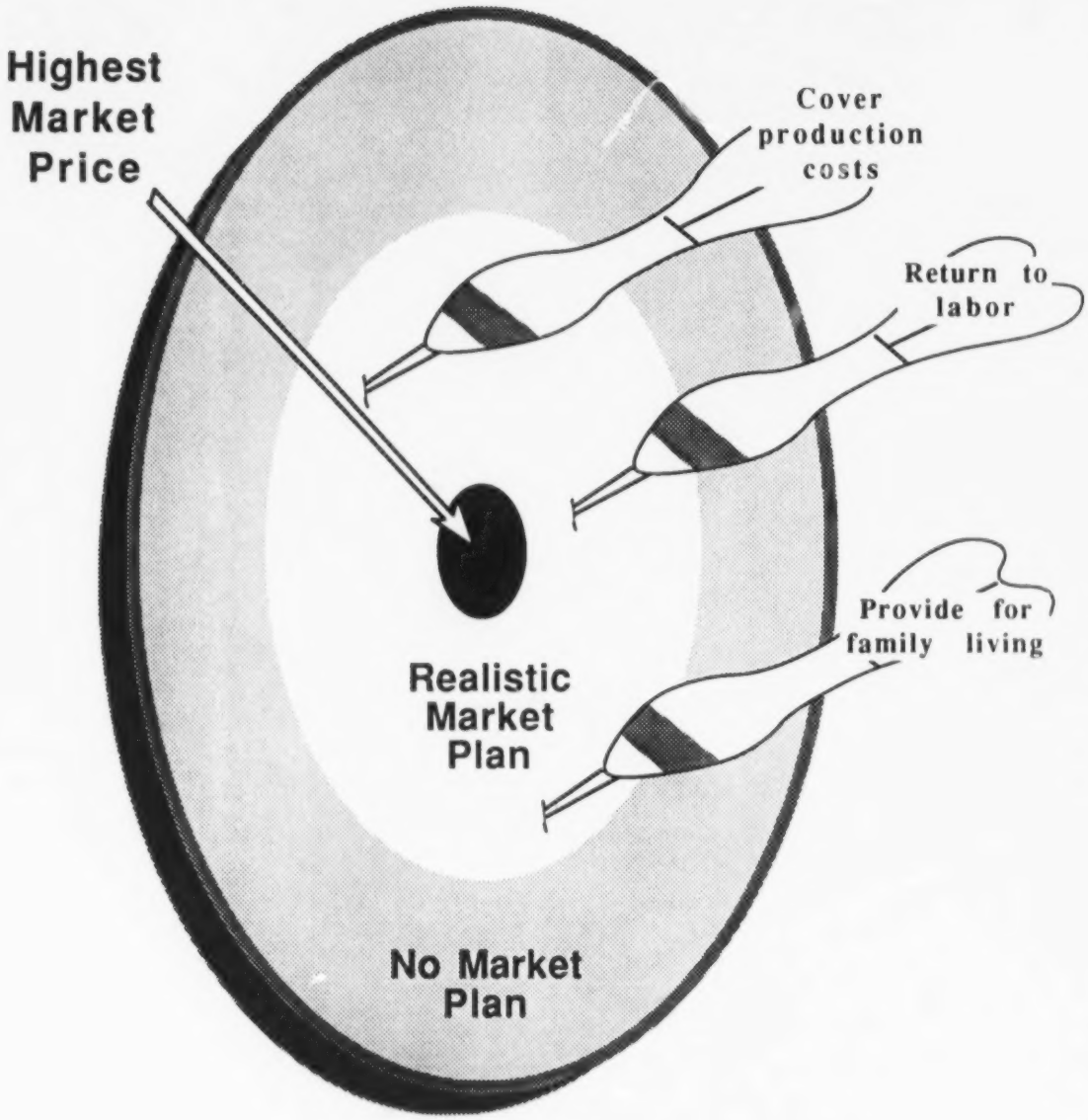
Spread between high and low weekly average price for the year



Bars indicate spread between high and low for that year.

Notice that since 1972 the price change per year has most often changed more compared to the years preceding 1972

TM 10-7



A market plan is realistic and reflects marketing goals

Smart marketing may include variable targets
- within the year (once a year commodity)
- within the month (continuous commodity)

Marketing Plan

A detailed program of action

"I plan to hold 50 percent of the corn crop until after Jan 1."

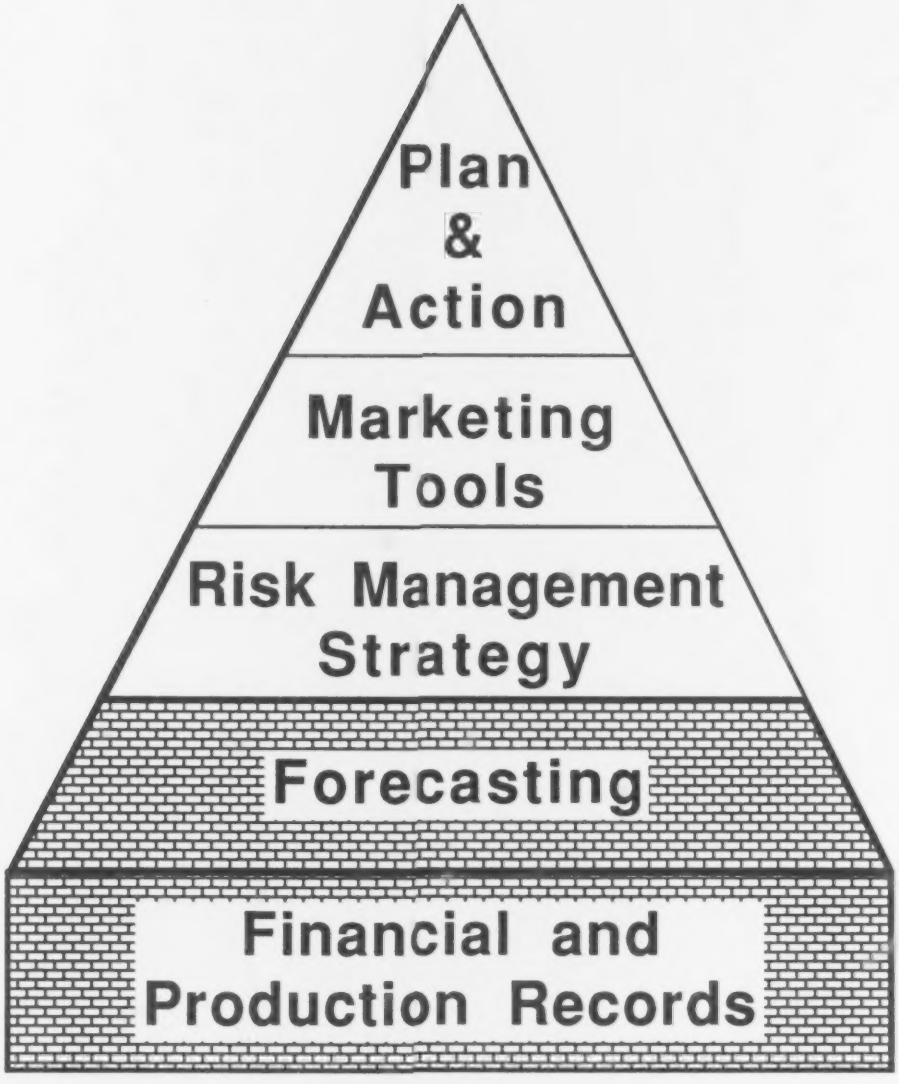
Marketing Strategy

Action taken based on a set of rules

"I will sell all of the corn crop if the price goes above my target price."

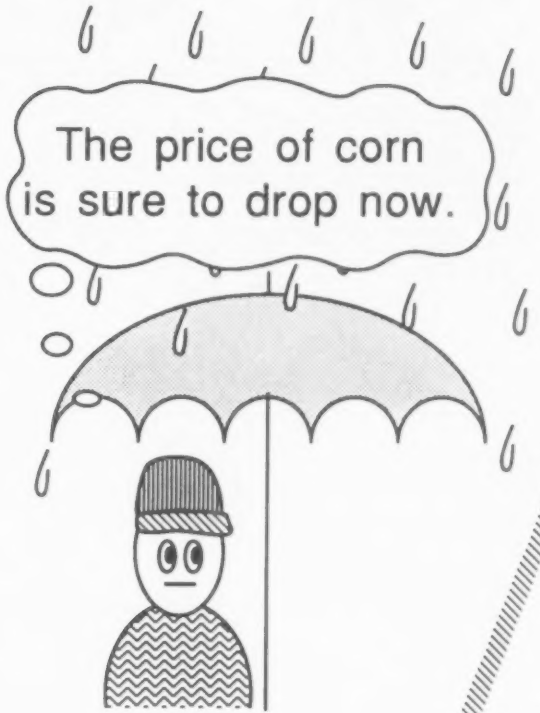
Do you keep these marketing records?

- prices received
- grade premiums received
- discounts received
- difference between price received and the general market price
- difference between price received and price before you priced or sold
- difference between price received and price after you priced or sold
- difference between price received and price offered by other alternatives



Financial and Production Records are the foundation of marketing. Forecasting prices builds on this foundation.

Fundamental Market Analysis



Technical Market Analysis

Fundamental Market Analysis

The use of known and expected supply and demand factors to understand and forecast market behavior and conditions

Fundamental Analysis of the Hog Market

Per capita supply of pork

Demand for pork

Price or supply of competing meat and poultry products

Farm to retail spread on pork

Hogs and Pigs

National Agricultural Statistics Service
Fact Finding for Agriculture

United States Department of Agriculture
Agricultural Statistics Board
Washington, D.C.

Released: January 6, 1989
3:00 P.M.

In This Issue:

- Inventories
- Pig Crops
- Intentions
- Operations
- Inventory Values
- Revisions for 1987 and 1988

INVENTORY UP 1 PERCENT: U.S. inventory of all hogs and pigs was estimated at 55.3 million head on December 1, 1988, according to the Agricultural Statistics Board. This was 1 percent above a year ago and 9 percent ab[illegible] 1986.

[illegible]8 PIG CROP: The U.S. pig crop for 1988 totaled 92.6 million head, 5 percent above 1987 and 12 percent above the 1986 pig crop.

- - December 1987 -May 1988 pig crop, estimated at 46.8 million head, was up 8 percent from a year earlier and 16 percent above the comparable period in 1986.

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*Example of fundamental market information provided in narrative form.

Hogs and Pigs

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HOGS AND PIGS: INVENTORY NUMBER, MARCH 1, JUNE 1, SEPTEMBER 1, DECEMBER 1

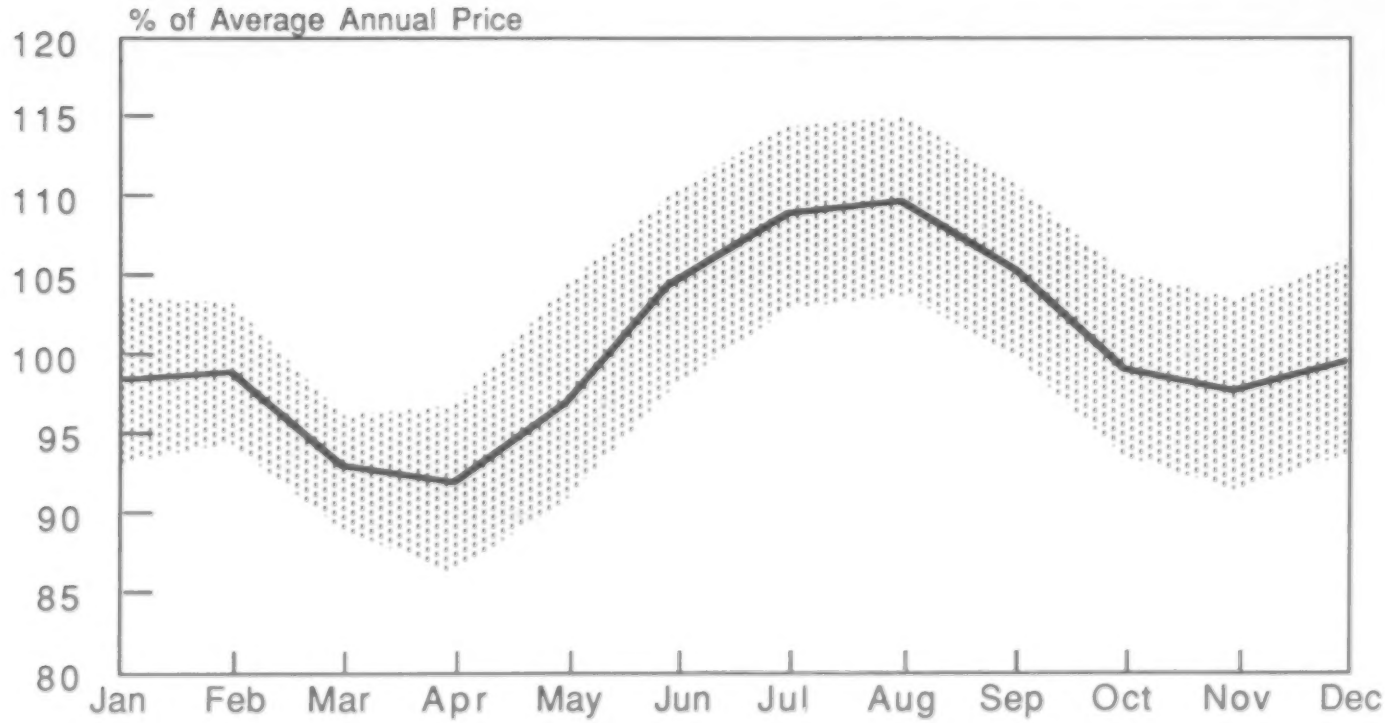
ITEM	1986	1987	1988	1988 AS % OF 1986	1988 AS % OF 1987
	1000 HEAD			PERCENT	
MARCH 1 INVENTORY					
ALL HOGS AND PIGS	NA	NA	52,345	NA	NA
KEPT FOR BREEDING	NA	NA	7,120	NA	NA
MARKET	NA	NA	45,225	NA	NA

	1988
MARCH 1 INVENTORY	
ALL HOGS AND PIGS	52,345
KEPT FOR BREEDING	7,120
MARKET	45,225

*Example of fundamental market information provided in table form.

Slaughter Hogs--Iowa/So. Minnesota

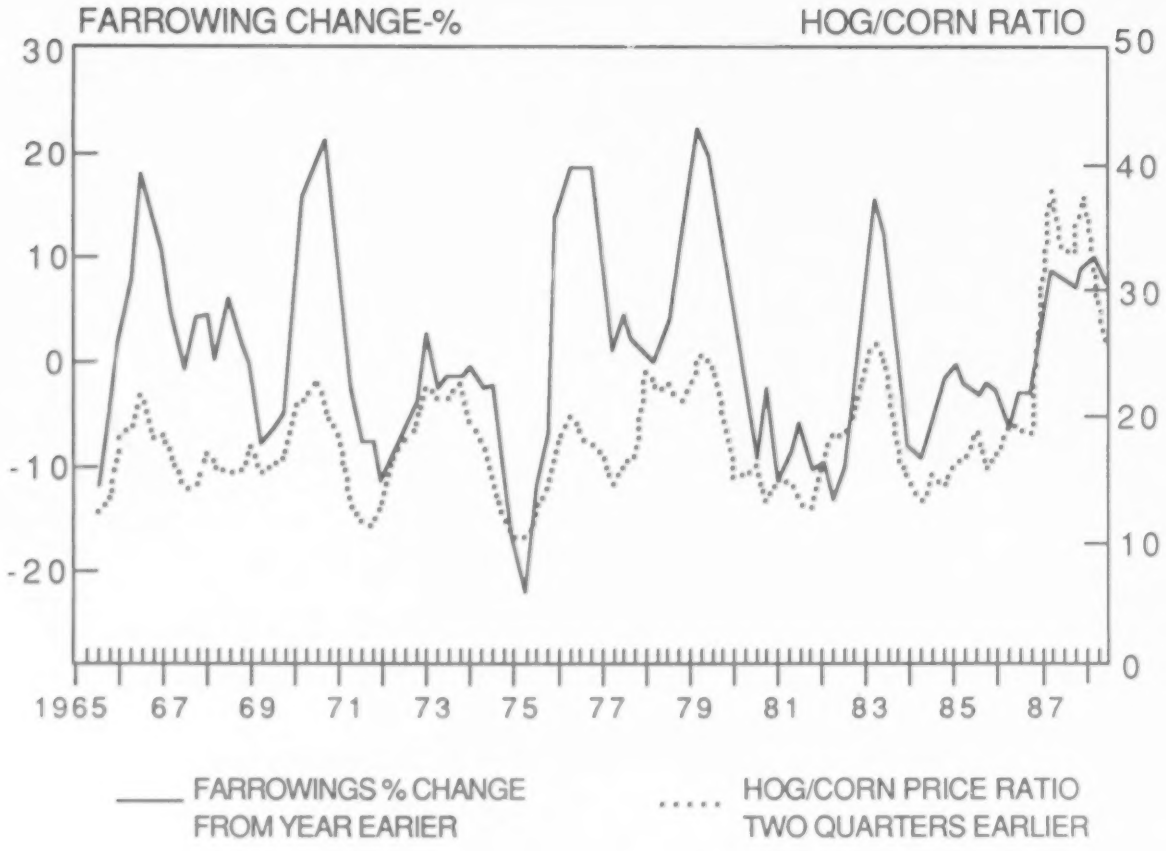
U.S. 1-2, 210-240 lb. 1979-1988



Shaded area indicates +/- two standard deviations.

*Seasonally, prices are higher in the summer months than in March or April. What does this mean to you as a producer?

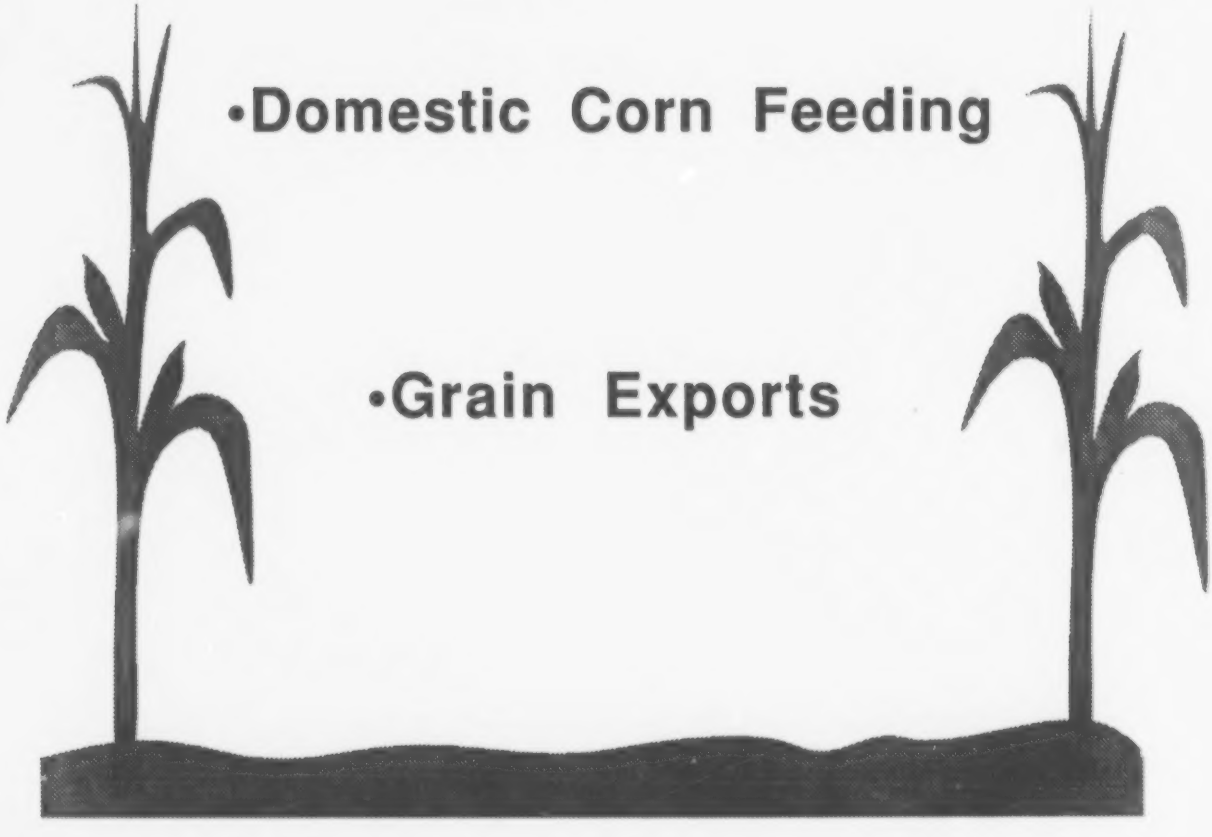
FARROWING CHANGE & HOG/CORN PRICE RATIO

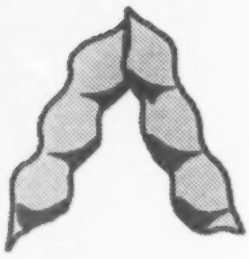


Example: Note that a sharp rise in the hog/corn price ratio in the middle of 1986 (from about 20 to nearly 40) preceded an increase in farrowing in early 1987 compared to early 1986 (approximately 10 percent increase).

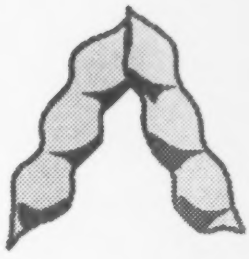
Fundamental Analysis of the Corn Market

- Economic Relationships in the Corn Market
- Domestic Corn Feeding
- Grain Exports





Fundamental Factors Affecting the Soybean Market



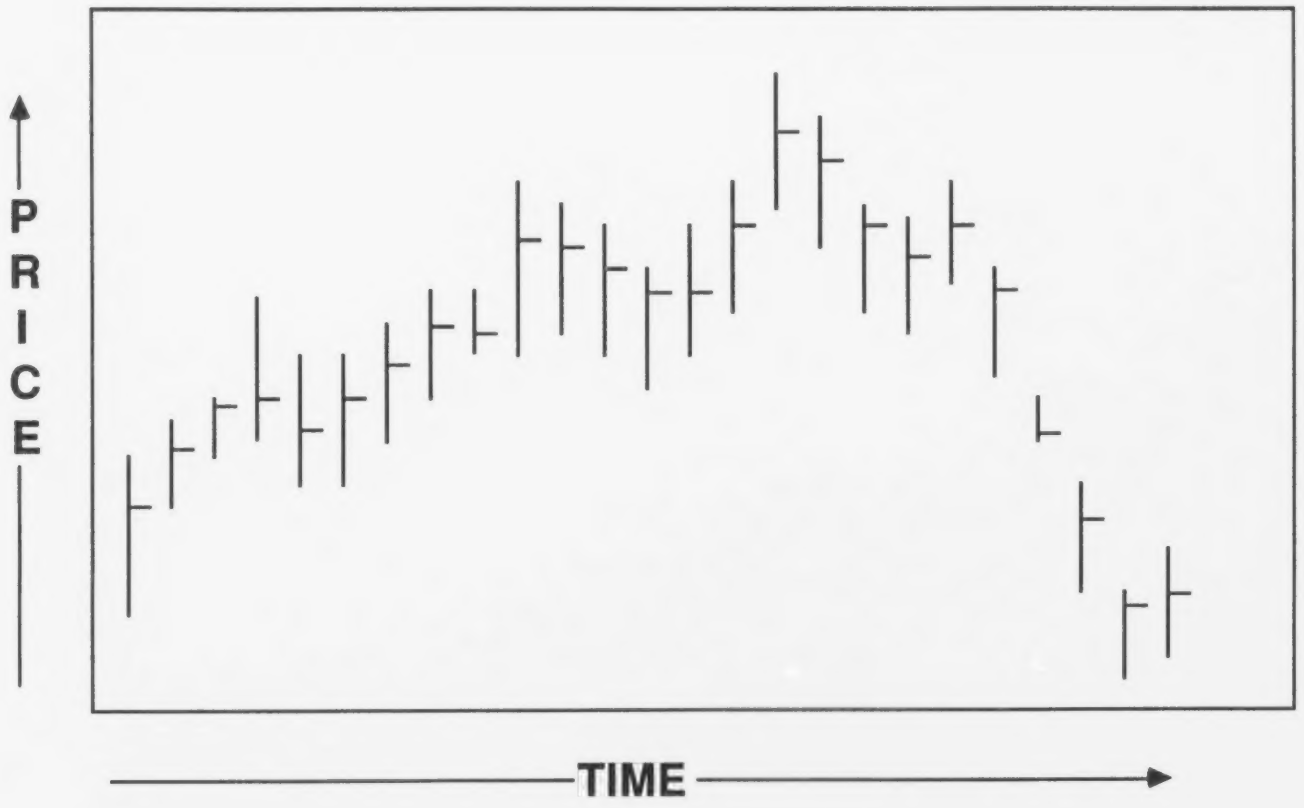
- Domestic Meal Demand
- Soybean Protein Exports
- Soybean Oil Use
- Soybean Oil Exports
- World Soybean Situation

Soybean production in Brazil and Agrentina affect U.S. markets.

Technical Market Analysis

The use of charts of prices, trading volume, open interest, and price cycles, along with historical market behavior and market rules to interpret and forecast price movements.

Bar charts visually illustrate price trends over time.

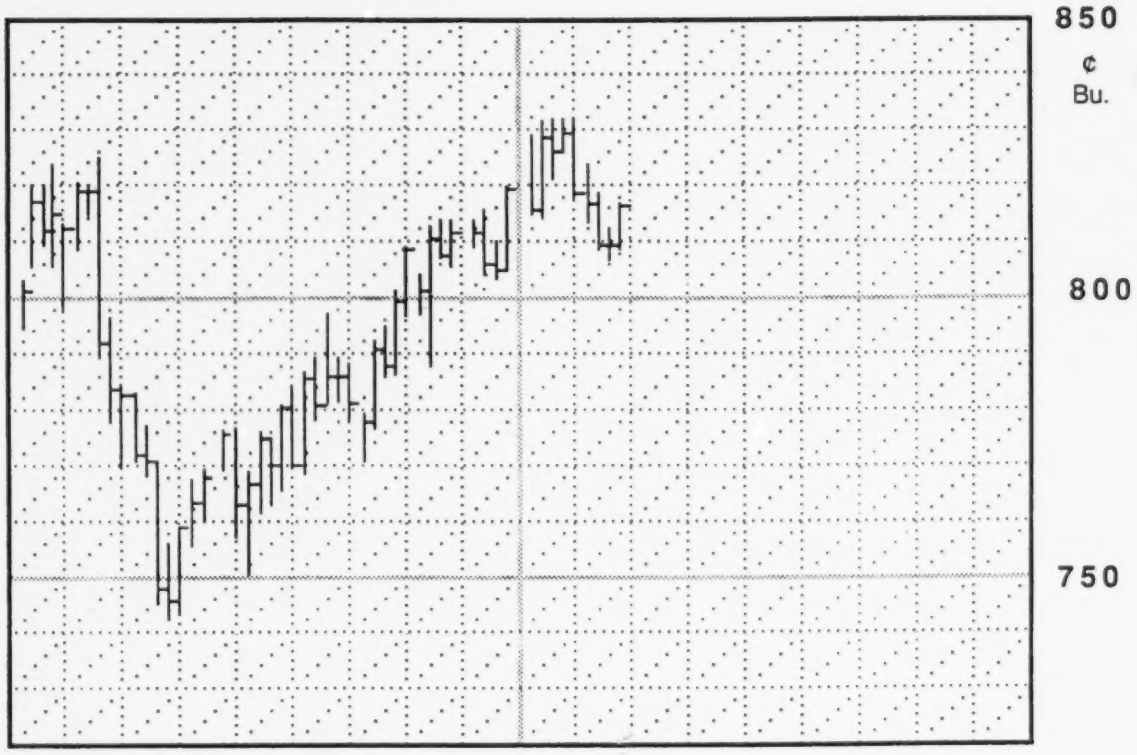


Technical Market Analysis

Highest price of period

Closing price of period

Lowest price of period



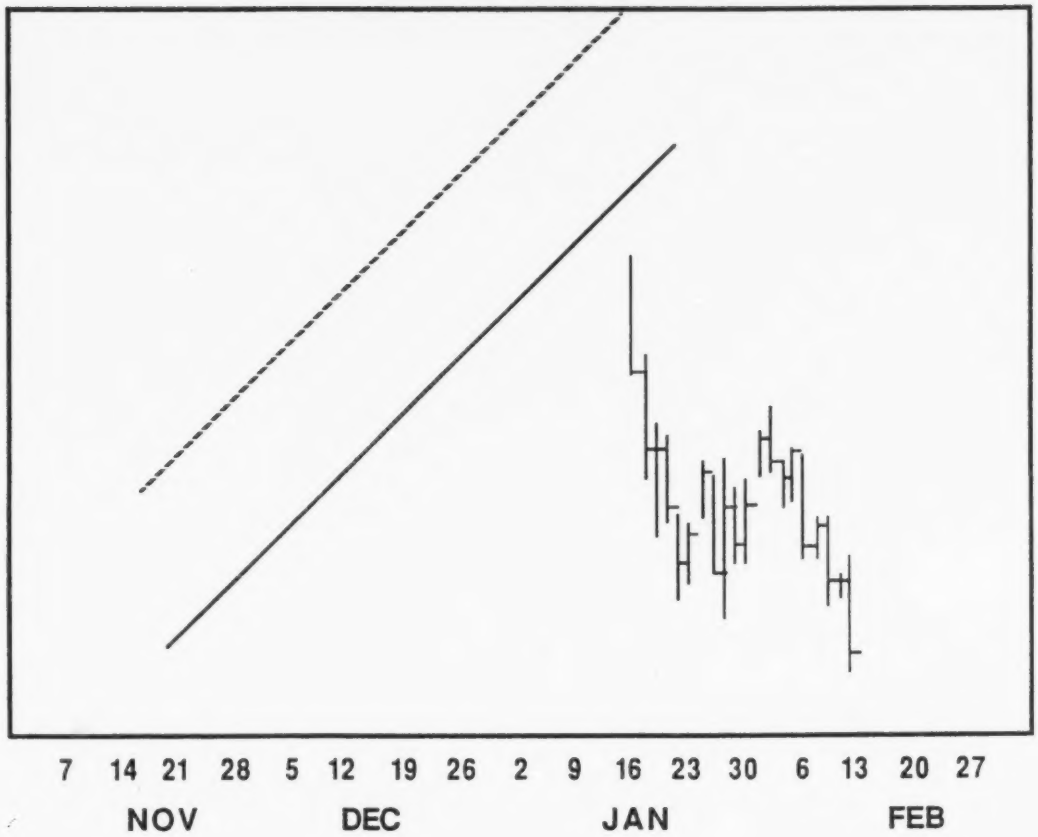
Can you identify a chart formation here?

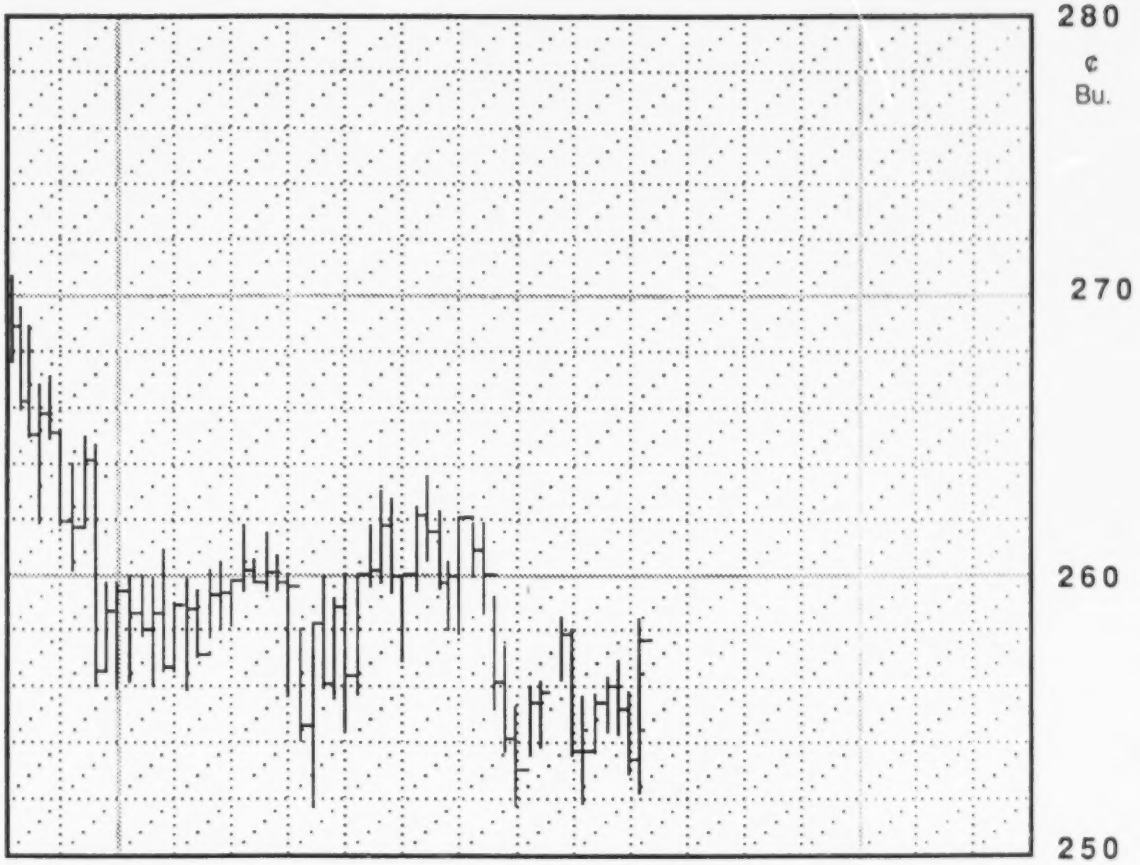
What does this tell you about expected prices?

What does this mean to you as a producer?

MARCH 89 SOYBEANS

Each Horizontal line = 10 cents





Can you identify a chart formation here?

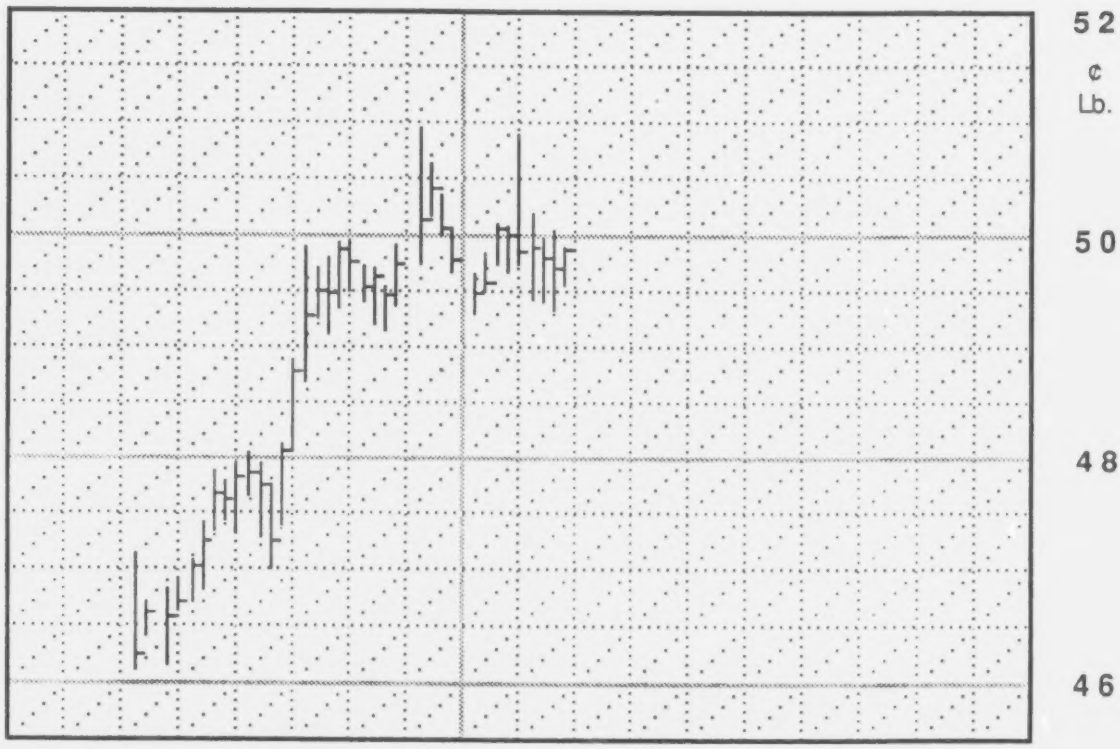
What does this tell you about expected prices?

What does this mean to you as a producer?

TM 10-26a

DEC. 89 CORN

Each Horizontal line = 2 cents



Can you identify a chart formation here?

What does this tell you about expected prices?

What does this mean to you as a producer?

JULY 89 HOGS

Each Horizontal line = 50 points

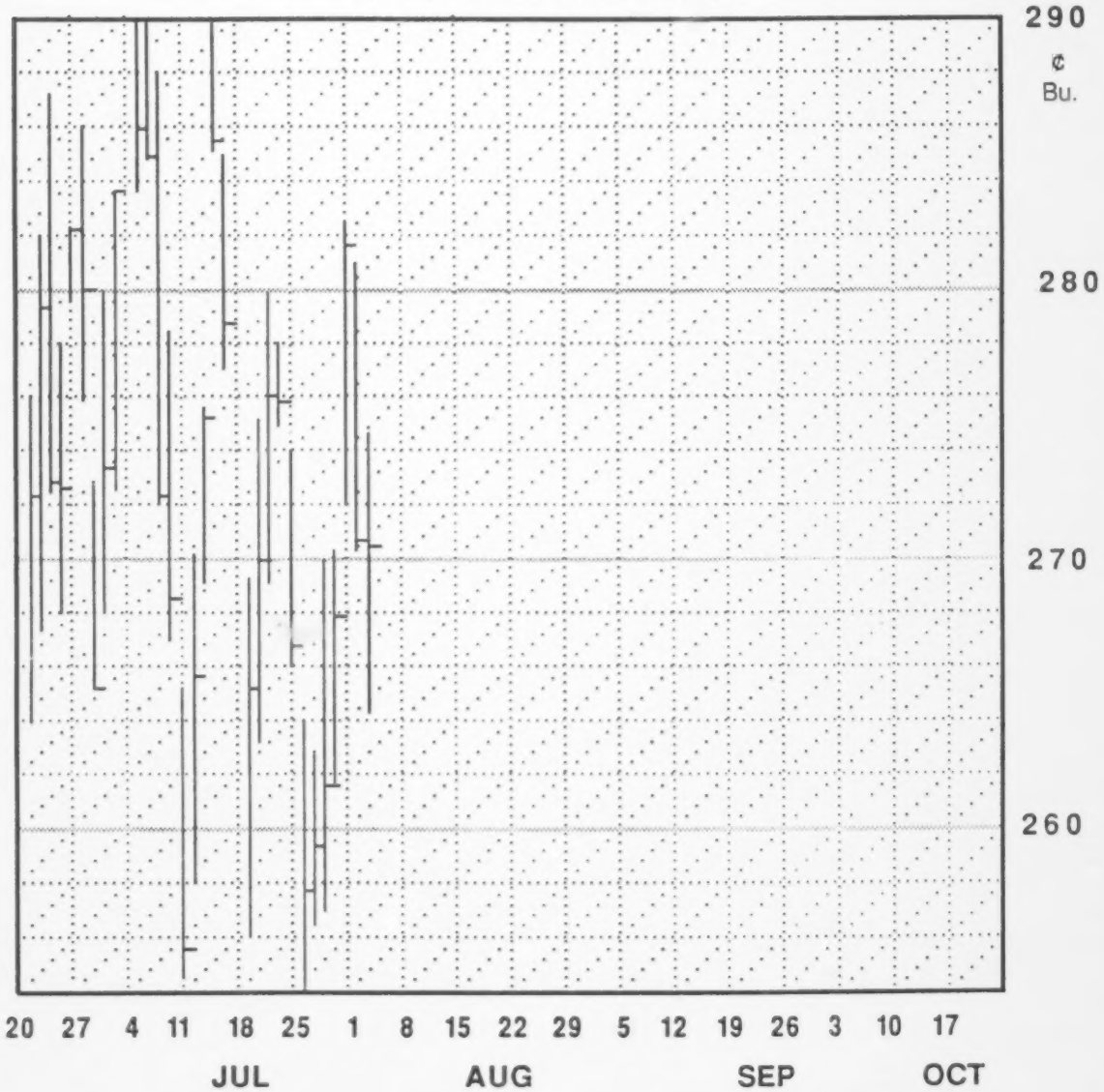
14 21 28 5 12 19 26 2 9 16 23 30 6 13 20 27 6

NOV DEC JAN FEB

DEC. 89 CORN

TM 10-28

Each Horizontal line = 2 cents



What explanation can be given for this chart formation?

What does this mean to you as a producer?

TM 10-29

IOWA FARM OUTLOOK

October 4, 1988 — Ames, Iowa — Econ. Inf. 1511

EXPANSION SLOWING

United States Department of Agriculture

Economic Research Service

LPS-31
August 1988

Livestock and Poultry

Situation and Outlook Report

University Extension
UNIVERSITY OF MISSOURI
LINCOLN UNIVERSITY
"KNOWLEDGE WORKING FOR MISSOURIANS"

Missouri Agricultural Outlook Letter

July 18, 1988
Issue #152

HOG OUTLOOK

Prepared by Glenn Grimes, Professor Emeritus

...year of September 1, 1988 to August 31,

Cooperative Extension Service
University of Illinois at Urbana-Champaign

WEEKLY OUTLOOK

Department of Agricultural Economics
College of Agriculture
University of Illinois at Urbana-Champaign

September 28, 1988

SOYBEAN EXPOR...

SUMMARY

1. Marketing may make the difference between profit and loss.

2. Your own market plan evolves as you learn more about marketing.

3. You develop forecasts of future supply, demand, and prices.

4. Timely and reliable market information assists you to forecast prices.

5. Additional information will provide even more help in marketing.